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XIX.—On the Native Races of New Mexico.

By A. W. BELL, Esq., M.D.

FOUR distinct races are now encountered by the traveller in New Mexico. These are:—

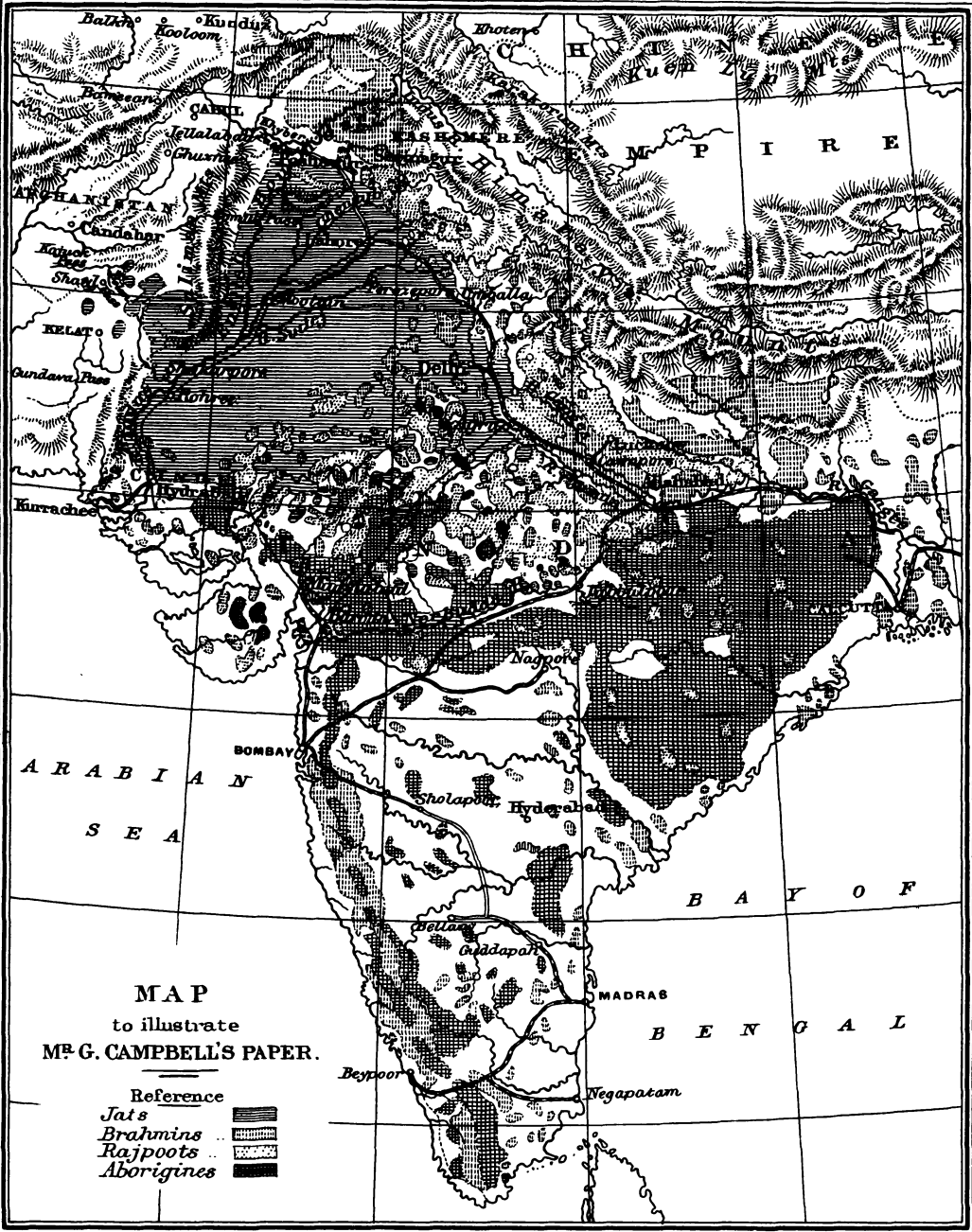
	Population.
1. The Americans	about 13,000
2. The Mexicans	„ 75,000
3. The Pueblo Indians.....	„ 16,000
4. The Wild Indians	„ 23,000
	127,300

The semicivilized native races and their natural enemies require to be described separately. The Pueblo, or town Indians, are the most remarkable and important tribe to be found in any part of the United States or Canada; they are, in fact, the only native race whose presence on the soil is not a curse to the country.

Whilst on the plains, whatever belief we had in the nobility of the red-skin, or the cruelty of the frontier man, quickly vanished, and we learnt to regard the Indian of the plain as the embodiment of all that was cruel, dastardly, and degrading. We were not long, however, in the Rio Grande valley before we encountered a new race, as different from our old enemies as light from darkness.

I first met a small party of these people on the plain a few miles west of the Pecos; they were neatly dressed in buckskin skirt and breeches, which latter fitted tightly to their legs; they wore mocassins on their feet, and a girdle around their waist. Their heads were bare, their black hair was cut square in front almost to the eyebrows, and gathered up behind into a queue bound round with red cord; a narrow band also passed over the hair in front and was fastened underneath. They were short in stature, thickly built, with quiet intelligent faces and large sorrowful eyes. I never, during my residence in their valley, saw a Pueblo Indian laugh; I do not remember even a smile. They carried no arms that we could discover, but each pushed before him a little hand-cart composed of a body of wickerwork on wooden wheels, filled with grapes, the produce of their vineyards. They were on their way to Los Vegas, and seemed so sure of a good market that we had to pay ten dollars for a large basket of grapes weighing from 50 to 80 lbs.

At Santa Fé I watched these people coming and going, bringing their produce in the morning (peaches, grapes, onions, beans, melons, and hay) for sale, then buying what necessities they wanted, and trudging off in the afternoon quietly and



modestly to their country villages. I looked on them with pity, and wondered what they thought of this new state of things, and how they liked the intruders whose presence they bore so meekly. I met Mr. Ward, their agent, who treats them as the kindest father would his children; and often went to his house, where Indian parties from a distance were sure to resort for information and advice. When I left Santa Fé I passed through many of their villages, saw them in their houses, visited their fields and vineyards, and watched them as they assembled on their housetops at sunrise to look for the coming of Montezuma from the east.

The semicivilized Indian of the United States is only to be found in New Mexico and Arizona, south of the 36th parallel of latitude; nor is there any proof whatever, but merely some vague traditions, to show that he ever came from the north, or spread further north than the Rio Grande valley and the accessible branches of the San Juan River. In these two territories (together equal in size to France) only five small remnants of this once powerful nation remain at the present time. These are:—

1. The Pueblo Indians of the Rio Grande valley; population 5866.

2. The Indians of Zúñi, situated about latitude 35° , longitude $108^{\circ} 50'$, with a population at present of 1200 souls.

3. The Indians of the seven Moqui pueblos, situated about 150 miles north-west of Zúñi; population 2500.

4. The Pimas of the Gila valley, occupying eight villages; population 3500.

5. The Papago Indians of the regions south of it, occupying about nineteen villages, and numbering about not less than 4000 in all.

The Pueblo Indians of the Rio Grande valley were early converted to Christianity by the Spanish missionaries. Each pueblo has its church, built of adobe, and dedicated to its patron saint. An exact copy of one of their churches was given in the series of illustrations exhibited.

The following Table was kindly furnished me by Mr. Ward; it clearly shows the state of the population during three-quarters of a century:—

**TABULAR STATEMENT OF INDIAN PUEBLOS (VILLAGES) WITHIN THE
TERRITORY OF NEW MEXICO.**

No. of pueblos.	Names of pueblos, with the names of their respective patron saints.	Census.					Spanish grants in acres.	Date of grants.
		1790.	1809.	1850.	1860.	1864.		
1	Taos, San Geronimo de	518	527	361	363	361	17,560	1689
2	Pecuries, San Lorenzo de ...	254	313	222	143	122	17,460	"
3	Abiquiu, San Tomas de	216	126	...	...	...	...	"
4	San Juan de los Caballeros...	260	208	568	341	385	17,544	"
5	Santa Clara	134	220	279	179	144	17,368	"
6	San Ildefonso	240	283	139	154	161	17,292	"
7	Pojuaque, Nuestra Señora de Guadalupe de	53	000	48	37	29	13,520	"
8	Nambe, San Francisco de ...	155	133	111	103	94	13,586	"
9	Tesuque, San Diego de	138	160	119	97	101	17,471	"
10	Pecos, Nuestra Señora de los Angeles de	152	000	...	...	...	...	"
11	Cochiti, San Buenaventura de	720	697	254	172	229	24,256	"
12	San Domingo	650	720	666	261	604	74,743	"
13	San Felipe	532	405	411	360	427	34,766	"
14	Sandia, Nuestra Señora de los Dolores de	304	364	241	217	197	24,187	1748
15	Isleta, San Agustin de la ...	410	487	751	440	786	110,080	"
16	Belen, Nuestra Señora de la ..	000	133	...	...	...	...	"
17	Santa Ana	356	550	399	316	298	...	"
18	Zia, Nuestra Señora de la Assumpcion de	275	286	124	117	103	17,514	1689
19	Jemes, San Diego de	485	297	365	650	346	17,510	"
20	Laguna, San José de la	668	1022	749	927	988	...	"
21	Acoma, San Estevan de	820	816	350	523	491	...	"
22	Zuñi, Nuestra Señora Guadalupe de	1935	1598	1500	1300	1200	...	"
		9275						
	<i>Within the jurisdiction of El Paso.</i>							
1	Seneca, San Antonio	410	...	...	...	...	...	
2	Isleta, San Antonio de la ...	430	...	...	...	...	...	
3	Socorro, Nuestra Señora del ..	620	...	...	...	...	...	
4	San Lorenzo del Real	440	...	...	...	...	...	
26	Total	11,175	9345	7657	6700	7066		

NOTES.—The censuses of 1790 and 1809 were taken by order of the Spanish authorities. This duty was usually performed by the missionaries, or parish priests, residing among the Indians; hence there is every reason to believe that they were accurately taken.

The censuses of 1850 and 1860 were taken by the deputy marshals, appointed for the purpose by the United States; and those of 1864 were taken by me, at which time I visited all the pueblos, Zuñi excepted; but my previous visits to, and knowledge of, this pueblo warrant me in placing the number of its inhabitants at the figures inserted in this return.

To read the names of the pueblos properly, they must be read thus:—San Geronimo de Taos, San Lorenzo de Pecuries, and so on, except Nos. 4, 5, 6, 12, 13, and 17, which must be read as they are inserted, and also San Lorenzo del Real.

Ciphers indicate no census given during the date under which they are inserted.

The dots opposite to the names of the three respective pueblos are simply intended to fill space, those pueblos having been out of existence for many years.

JOHN WARD, *Special Agent for Pueblos.*

Santa Fé, New Mexico, July 10, 1867.

Most of the above villages are in the main valley. Others, such as the Pueblos de Toas, Laguna, Acoma, San Domingo, and others, occupy isolated positions on some of the tributary streams. The villages in the Rio Grande valley differ but little from those of the Mexicans, except that the houses are larger and loftier. They are usually of only one story, but each house is capable of containing several families; the roofs are flat; and at different corners of the village watch-towers rise above the roofs. In the centre of the chief house in the village, a good-sized room, partly formed by excavation into the earth, is usually to be found. This is the estufa, or place of worship, where the sacred fire was formerly kept burning, and where all religious services used to be held before the Indians became Christians. Now it is used in most villages only as a council-chamber; but Colonel M'Leod, of Santa Fé, assures me that in some places the sacred fire is still kept burning, and that on one occasion he was permitted to visit an estufa where it continues to exist.

Each pueblo has a separate government of its own, consisting, first, of a cacique, or governor, chosen from amongst the men advanced in years—the sages, in fact. The cacique holds office for life, he presides over the council, and is chosen for his wisdom. His decisions are usually adopted. Secondly, a war captain is selected from amongst the braves, who arranges all campaigns made against an enemy, and through his lieutenant (or master of the horse, as we should call him) has the management of the nahallada, or horse-herd. Thirdly, the fiscal-major and his assistants regulate church matters, repair the churches, &c. The old and experienced men collectively are the law-makers, and elect all officers except the cacique, who is chosen by universal suffrage. The people of the villages do not all speak the same tongue; and they resort to the Spanish language, which they acquire with tolerable facility, as a common medium of communication. The Pueblos form four groups, if classed according to dialects:—

1. Pueblo de Toas, de Picuries, Sandia and Isleta.
2. San Juan, Santa Clara, San Ildefonso, Nambé, Pojuaque, and Tezuque.
3. Cochité, San Domingo, San Felipe, Santa Ana, Silla (Zia) and Laguna, Acoma.
4. Jemes.

The people of Zufi speak a fifth dialect. Those of the Moqui pueblos speak the same as that of Jemes. The Spanish missionaries found little difficulty in teaching those natives to read and write; but since the decay of religious establishments throughout Northern Mexico education has been arrested, and now not a single school exists in any of the pueblos.

In religion they are, to outward appearance, devoted Roman Catholics; the few priests who still work amongst them are Frenchmen, and are much respected and beloved. The rites of baptism, marriage, and burial take place in the village church, and they keep the feast-day of their patron saint with great festivities.

The isolated pueblos, which lie at considerable distances from the main valley, are very different in appearance from those simpler one-storied villages which once dotted the banks of the Rio Grande del Norte in very considerable numbers. In these, the distinctive peculiarities of the native fortifications are very striking. Laguna, on the Rio de San José, is built on the summit of a limestone cliff, some forty feet high, possessing considerable natural advantages for defence. The houses are mostly of stone plastered over with mud, and two stories high. Neither windows nor doors are to be found on the outer wall of the first story; the second rises a little back from the roof of the first, leaving a ledge in front of it. Ladders are used to mount to this ledge; they are then drawn up, and the rooms are entered either by openings in the roof leading to the ground-floor, or by doors giving entrance from the ledge to the second suite of rooms; the latter alone are used for sleeping. Store-rooms occupy the ground-floor.

In 1858 there was a Baptist minister at Laguna; and in one of his reports to the Indian department of the Secretary of the Interior he stated that the amount of real christianity amongst the Indians is very small; they cling to the religion of their forefathers, and can only be induced to attend the service of the Roman Catholic Church by threats, promises, and even blows, whereas they perform their own religious duties with the utmost regularity. He also joined in the universal eulogium on the honesty and sobriety of the men, and the virtue of the women.

Acoma, some twenty miles west of Laguna, is a large and very interesting pueblo. It rests on the summit of a flat mesa, whose perpendicular cliffs rise to a height of from 300 to 400 feet above the valley. The houses here are three stories high, built on the usual principle, each successive story being smaller than that on which it rests. Ladders are also used to reach the ledges. The flat top of the mesa includes about fifty acres of land; it is reached by a steep winding path cut in the rock, and

so placed as to be easily defended. It is a very wealthy pueblo; the Indians own abundance of cattle, and grow large quantities of corn, peaches, pumpkins, and other produce.

The houses of San Domingo, Sandia, and others, although only built of one story, have no doors or windows on the outside, but are entered by ladders from the roof.

The ancient pueblo of Toas consists of one compact fortress, formed of terraces seven stories high, and built on a rock overlooking the stream. So strong was it as a place of defence, that in 1847, when the Mexicans of the village of Toas could no longer defend themselves against the Americans, they betook themselves to the Indian pueblo a few miles distant, and there sustained a protracted siege, yielding at last only when provisions had utterly failed. This pueblo, moreover, was never taken by the Spaniards, although it was many times attacked.

Venegas, Coronado, and, in fact, all the early Spanish explorers and writers upon New Mexico describe numerous seven-storied fortresses now no more, and give many instances of the great bravery shown by the Indians in their defence. Those I have mentioned, however, with the exception of Zufi and the seven Moqui pueblos, are the only native fortresses which now remain inhabited.

The most interesting of all the pueblos is undoubtedly Zufi. [The enlarged views of the building which were exhibited, copied from a photograph, gave a good idea of its general appearance.] It is built on a rising ground, affording an extensive view of the surrounding country; and six terraces at least can be counted one above the other. Ladders planted against the wall give access to the different terraces upon which the doors of the apartments open.

In the valley through which the Zufi River (a tributary of the Colorado Chiquito) flows are to be seen orchards (chiefly of peach-trees), vineyards, fine corn-plots, and vegetable-gardens producing onions, beans, melons, chili colorado (red pepper), pumpkins, &c. Formerly cotton was cultivated, probably by Indians further south; but now they obtain what stuffs they require from the Mexicans in exchange for farm produce. They do not raise their crops by irrigation, but depend entirely upon the rainfall; hence all their traditions relate more or less to the production of water.

Not far from the town is a sacred spring, about 8 feet in diameter, walled round with stones, of which neither cattle nor man may drink. The animals sacred to water (frogs, tortoises, and snakes) alone must enter the pool. Once a year the cacique and his attendants perform certain religious rites at the spring: it is thoroughly cleared out; water-pots are brought as an offering

to the spirit of Montezuma, and are placed bottom upwards on the top of the wall of stones. Many of these have been removed ; but some still remain, while the ground around is strewn with fragments of vases which have crumbled into decay from age.

Not far from the present pueblo is a lofty mesa, which rises about 1000 feet perpendicularly from the plain ; upon this are many ruins of houses and a sacred altar, constituting all that remains of old Zufii.

The following tradition is related about this place :—Long before the first appearance of the white man, a dreadful flood visited the land. Waters gushed forth from the earth, and huge waves rolled in from the west, drowning man and beast ; even the wild Apaches and Coyotes did not escape. Then many of the people of Zufii rushed to the lofty mesa, but many more perished in the waters. Night came, and yet the waters rose higher and higher, until they reached the water-mark still distinctly visible high up on the cliff wall. The great Spirit was very wroth with his people, and must be appeased by a fitting sacrifice. So the son of the cacique and the most beautiful maiden in the tribe were bound and lowered down into the seething flood ; then the waves abated, and the remnant of the people were saved. The young man and the maiden were transformed into two lofty pillars of stone, which rise from a natural battlement on one part of the summit. Time has worn these two pillars into four. They are still greatly venerated by the people of Zufii.

After building a town on the lofty mesa, they lived there for many years ; but as it was far removed from their fertile bottom-lands, and as no second flood visited their country, they returned to their present abode. When the Spaniards, however, made war against them, they fled for a second time to their ancient stronghold, and, according to their own account, made a fierce resistance, by fortifying the only two approaches by which the summit could be gained, and by hurling huge stones upon their assailants ; the enemy, however, was victorious.

Spanish influence was never strong enough at Zufii to convert the natives to Christianity : they tolerated the presence of a church outside the walls of the pueblo (now a ruin) ; but they still cling devotedly to their old traditions, and attribute their temporal prosperity, and the comparative immunity of their country from drought, to the steadfast observance of their ancient ceremonies. They believe in the one great Spirit, and in Montezuma his son, who will some day come again to them from the east, and unite all the nations once more under his banner.

Our party found the people of Zufii to be very honest, but uncommonly sharp traders—so much so that they had the greatest

difficulty in buying any sheep from them, although they had flocks in abundance; they parted with their maize and farm produce much more readily, but they understood the value of everything so thoroughly that they always insisted on receiving *quid pro quo*. They seemed to take great pleasure in keeping tame eagles and turkeys. Albinos are unusually common amongst them, whose complexions are as fair as those of Europeans. Like the other branches of the Pueblo Indians, the women of Zúñi are very chaste, and plurality of wives is not allowed.

Situated to the north-east of the San Francisco Peaks, about twenty miles from the Colorado Chiquito, on the opposite side to the mountains, are grouped, within a radius of ten miles, the seven villages of Moqui. The country is arid and uninviting, much broken, and partly formed of steep mesas, partly of volcanic peaks. Upon the very edge of some of these mesas the villages are planted. They are mostly of three stories, built in the form of a square, with a court, common to the whole community, forming the centre. The first story, or basement, consists of a stone wall 15 feet high, the top of which forms a landing extending round the whole. A flight of stone steps leads from the first to the second landing, and thence up to the roof. The doors open upon the landing. The houses are three rooms deep, the first being used for eating, cooking, &c., the others as sleeping-apartments. Great neatness is observable both in the household arrangements and personal habits of the people. They sit upon skins on the floor, clothe themselves with linen trousers, shirts, and a Navajo blanket thrown across their shoulders. Upon the walls hang bows, arrows, quivers, antlers, blankets, articles of clothing, &c.; vases, flat dishes, and gourds, filled with meal or water, stand usually along one side of the room. In complexion they are rather fair for Indians; although quiet in their manners they are very light-hearted: honesty, frankness, and hospitality are amongst their good qualities; but they want the manly bearing of the Zúñi Indians, and have, until lately, lived in great fear of their warlike neighbours, the Navajos.

The most interesting features about their villages are the reservoirs which they build to retain the rain-water. At the back of each building, upon the mesa itself, a good-sized reservoir, some 5 feet or upwards in depth and lined throughout with masonry, is usually to be found; a little lower down is a second one, with a pipe leading to it from the former. This lower reservoir is for the animals, the upper one for the people, and for household use. On each side of the tanks, the sloping sides of the mesa are formed into terraces neatly paved with masonry, and surrounded by a raised edge, so as to retain the water

brought to them through pipes from the reservoirs. Peach-trees grow upon the terraces; and most of their crops are raised in this way by carefully husbanding the rainfall and using it for irrigation. Many flocks are owned by them; and most of the sheep are black.

Mr. Leroux, who was the first American to visit them (1850), estimated the united population of the seven villages at 6700, the largest containing 2400 inhabitants. Since then, however, small-pox has committed terrible ravages amongst them; and they have also suffered for several seasons from great deficiency of rainfall, so much so that they have been strongly advised to migrate to some more hospitable region. Within the last six years, however, the rains have been more abundant, and, by the latest reports from that out-of-the-way region, they seem to be in a very flourishing condition. Mr. Ward, however, after a careful inspection of the different communities, places the present population at only 2500 souls.

The next group of semicivilized Indians (the Pimas of the Rio Gila) differ from those I have already named, in that they inhabit huts instead of houses. In all other respects they are very similar.

After the Rio Gila has emerged from the succession of deep gorges through which it crosses the Pina-leño Cordilleras, it waters a rich and fertile valley forty or fifty miles long, between the mountains and the Gila desert. About twenty miles of this valley is occupied by these people. They devote themselves entirely to agriculture and to the arts of peace; but they are brave in war, and maintain a complete military organization for protection against the incursions of their wild neighbours the Apaches. I have often heard it said by western men that there are only two spots in New Mexico and Arizona where you can be certain of absolute safety; the one is in the pueblo of Zufi, the other amongst the Pimas on the Rio Gila. Both these peaceful tribes have been most useful allies of the United States' troops in their expeditions against the Navajos and Apaches; it has, indeed, been only through the assistance of the Pima warriors that any success has ever been gained against the latter sons of plunder.

The valley varies in width from two to four miles; and grouped up and down the stream, usually on ground a little above the level of the low-lying bottom-lands, are seen the cone-shaped huts which compose the villages. The huts are easily built, as they only consist of a framework of willow poles stuck in the ground, and arched over to meet in the centre; these are interlaced with others at right angles, and then covered with wheat-straw, neatly pinned down all round the sides, which may or

may not be daubed over with mud, and nicely thatched at the top.

Were we to judge only from their dwellings, we should place these people very low down in the list of Indian tribes; but when we examine the means which they adopt for raising their crops, when we see with what labour and skill they have divided off their lands into little patches of about 200 feet square, and have dug many miles of irrigating canals, each set radiating from the main artery, or "acequia madra," to supply every patch, then when we look at the pottery, the beautiful basket-work, the stores of farm-produce carefully packed away in well-made store-huts, when we see specimens of native weaving, and, perhaps more than all, when we look at the soft intelligent faces of these Indians, we recognize directly the same people, to all intents and purposes, as we met in the Rio Grande valley.

The most complete list of the population I have been able to discover is that of Mr. G. Bailey, Indian agent for the Pimas and Maricopas, dated 1858. It is as follows:—

PIMAS.

Name of village.	Warriors.	Women and children.	Total.
Buen Llano	132	259	391
Ormejera, No. 1	140	503	643
" No. 2	37	175	212
Casa Blanca	110	425	535
Chemisez	102	210	312
El Juez Farado	105	158	263
Arizo del Agua	235	535	770
Aranca	291	700	991
Total	1152	2965	4117

MARICOPAS.

Name of village.	Warriors.	Women and children.	Total.
El Juez Farado	116	198	314
Sacaton	76	128	204
Total	192	326	518

The productions are chiefly maize, wheat, beans, melons, pumpkins, onions, chili colorado (red pepper), &c.; they own a small quantity of stock, horned cattle, sheep, horses, pigs, mules, and poultry. They rely, however, for support mainly upon agricultural produce, milk, and eggs; and their production is

so much in excess of their requirements, that they dispose annually of more than a million bushels of grain to the government agents, at from four to six cents a pound, which, in our money, is nearly twopence. They formerly cultivated cotton, but now they find it far easier to buy the few cloth goods they require than to weave them.

Major Emory, of the United States regular army, was, I believe the first American to visit these people, in 1846, when, as Lieutenant Emory, he took charge of a military reconnoissance from Fort Leavenworth (Kansas) to San Diego, on the Pacific. He thus describes the scene:—"We had no sooner encamped, eight or nine miles from the Pima villages, than we met a Maricopa Indian looking for his cattle. The frank, confident manner in which he approached us was a strange contrast to that of the suspicious Apaches. Some six or eight of the Pimas came up soon after at full speed, to ascertain who we were and what we wanted. They told us that the first trail we had seen along the river was that of their people, sent to watch the movements of their enemies the Apaches. Their joy was unaffected at seeing that we were Americans, and not Apaches; and word to that effect was immediately sent back to the chief. Although the nearest villages were nine miles distant, our camp, in three hours, was filled with Pimas loaded with corn, beans, honey, and water-melons, so that a brisk trade was opened at once. Their mode of approach was perfectly frank and unsuspecting; many would leave their packs in our camp and be absent for hours, theft seeming to be unknown to them. On reaching the villages we were at once impressed with the beauty, order, and disposition of the arrangements for irrigating and draining the land. Maize, wheat, and cotton are the crops raised by this peaceful and intelligent race of people; all had just been gathered in, and the stubbles showed that they had been luxurious. The cotton was picked and stacked for drying on the tops of the sheds. The fields are subdivided by ridges of earth into rectangles of about 200 by 100 feet, for the convenience of irrigating. The fences are of sticks, wattled with willow and mezquit, and, in this particular, are an example of economy in agriculture worthy to be followed by the Mexicans, who never use fences at all.

"In front of each dome-shaped hut is usually a large arbour, on the top of which is piled the cotton in the pod for drying. To us it was a rare sight to be thrown in the midst of a large tribe of what are termed wild Indians, surpassing many of the Christian nations in agriculture, little behind them in useful arts, and immeasurably before them in honesty and virtue. During the whole of yesterday our camp was full of men, women,

and children, who sauntered amongst our packs unwatched ; and not a single instance of theft was reported.

" I saw a woman seated on the ground under the shade of one of the cotton-sheds ; her left leg was tucked under her seat, and her foot turned sole upwards ; between her big toe and the next was a spindle about 18 inches long, with a single fly of 4 or 6 inches. Ever and anon she gave it a twist in a dexterous manner, and at its end was drawn a coarse cotton thread. This was their spinning-jenny. Led on by this primitive display, I asked for their loom, by pointing to the thread and then to the blanket girt about the woman's loins. A fellow stretched in the dust, sunning himself, rose up leisurely, and untied a bundle which I had supposed to be a bow and arrows. This little package, with four stakes placed in the ground, was the loom. He laid open his cloth, and commenced the process of weaving."

Each alternate thread of the warp is passed round a piece of cane, which, when lifted, opens a passage for the shuttle in the manner of a sley. The operator sits like a tailor, and, raising the sley with one hand, shoots the shuttle through with the other. The work is beaten up after the passage of each thread by the use of a sharp-toothed instrument made of hard wood. Such an operation is, of course, most tedious ; and it is not surprising that even the very limited trade at present existing between the Indians and the outer world should have caused its abandonment, as well as that of the cultivation of cotton.

The pottery manufactured by the Pimas varies in colour from red to dark brown ; the articles made are limited to those which are absolutely necessary for domestic purposes. They consist of ollas, or vases, of every size, the largest containing about two pailfuls, the smallest half a pint, jars with small apertures resembling bottles, and basins of different sizes and shapes, from a milkpan to a saucer. All are more or less ornamented, and painted with black lines arranged in geometrical figures.

The basket-work is the most meritorious of all their native arts ; for although the baskets are made only of willow twigs or of grass, so closely are they plaited that liquids are placed in them as a matter of course, and seldom a drop escapes through the sides. A wicker rim is always fastened at the bottom, by which the larger baskets can be carried on the head like the vases, and the smaller ones can stand securely on the floor. They are of all sizes, and, together with the pottery, form the great articles of exchange between this people and other tribes, the Mexicans being about the best customers of all.

Their only native weapons are bows and arrows ; but they readily adopt all modern appliances, either in the shape of fire-arms or implements of agriculture. The United States Govern-

ment has, through its agents, supplied to them a considerable quantity of the latter during the last few years, by which means the annual produce of their farms has been greatly increased. As the ground is soft and friable, hoes, spades, and shovels are more in vogue than ploughs; and when any part of the valley shows signs of exhaustion, they give it rest, repair the old acequias which had previously been abandoned, and thus bring a reinvigorated patch of waste land again under cultivation.

Altogether, I may safely say that the present state of this industrious people is very satisfactory. Want is unknown amongst them; they are happy and contented; they are of great assistance to the colonists as well as to the government; for they help to confine the Apaches to their mountain retreats, and they supply the emigrants and troops with large quantities of corn. By the table of population already given, it will be seen that the women and children form a very fair proportion of the population; as for the latter, my friend Colton tells me that the whole valley swarms with them, and that these little monkeys are as full of fun as they can be. All this is encouraging, and leads us to hope that this people may escape the general destruction which, in North America especially, has fallen upon the aboriginal tribes with the advance of the Anglo-Saxon race. To attain so desirable a consummation two things are absolutely necessary:—

First, that the government should make their lands by law inalienable.

Second, that the high standard of morality, which has ever been remarkable amongst the Pimas and their neighbours, the Pueblo Indians, should not be broken down by any close intercourse with white men and their fire-water.

A word or two now about the Papagos. The Papago country is large in extent, but for the most part a complete desert. It comprises all the country south of the Rio Gila, which lies between the head of the Gulf of California and that extensive cordillera of which the Sierra Catarina forms the most westerly range, and extends for some fifty to a hundred miles into Sonora. All over this tract, wherever there happens to be a stream, a spring, or a little marsh among the barren rock hills which thrust their peaks above the parched and friable ground, or any spot favourable for tank irrigation, there you are very likely to find a little colony of Papagos, living, if at home, in huts similar in all respects to those of the Pimas. I have been through their desolate country, and visited many of their villages, and I feel convinced that the hard struggle they have always had with nature to support life in such a region has

done much to develop the energy and manliness of character peculiar to the tribe. As a race, they are the finest specimens of man, *physically*, I have ever seen. On one occasion I met five of them at a ranch, and not one of the party measured less than 6 feet 2 inches. If they were not so very dark in complexion, their features would be pleasing; for they have the steady, intelligent eye and straightforward manners of their more northern brethren the Pimas.

The most interesting point in connexion with them, however, is their mode of life. Like the Yaqui Indians of Southern Sonora, they very willingly leave their homes at certain seasons to gain a livelihood elsewhere. They own flocks and herds in considerable quantities, and they keep large droves of horses, or rather ponies. It is probable that a number of their villages, especially those supplied only by artificial tanks, are uninhabitable from want of water for a great part of the year, so that they are obliged to migrate to support themselves and their stock during the droughts. Be that as it may, they have become the greatest traders and the most industrious people to be found in the country. When the time for leaving their little patches of cultivated ground around the villages has arrived, some pack their merchandise, consisting chiefly of baskets and pottery similar to those made by the Pimas, on their ponies, and go down to Sonora to trade with the Mexicans, driving their stock with them to pasture in the comparatively fertile valleys to the southward. Others travel immense distances over the great Sonora Desert to the Gulf of California, and particularly to some salt-lakes about a hundred miles west of Altar, where they lay in a stock of salt and sea-shells, and then return to trade with the Indians on the Colorado, or the Pimas on the Gila, or to sell the salt to the Mexicans on the eastern side of their country. Others, who have no merchandise to sell or ponies to trade with, go to the settlements and ranches from Tucson southward, and willingly hire themselves out as field-labourers or miners. They work well for the Americans, and receive usually a dollar a day, which is certainly not bad wages. Then, when the time for planting comes round, they all return again to their own homes in the desert.

The Pimas resisted sternly all attempts made by the Jesuits or Franciscans to convert them, and are now so diffident on religious subjects that they will not discuss them, or give any information respecting their belief. The Papagos, however, probably from the close intercourse which they have so long kept up with the Mexicans, are, to all appearance, most devout Roman Catholics. A description of, I may say, the cathedral of the tribe will be found in my coming work. It is the last

relic of the Papago mission of San Xavier del Bac, and is situated on the Rio de Santa Cruz.

Intercourse with the Mexicans has also much modified their mode of dress ; for the men usually wear wide straw sombreros of home manufacture, moccasins, buckskin gaiters, a breech-cloth of cotton, and a snow-white cotton blanket thrown gracefully across the chest. The women wear petticoats ; and neither sex seems to affect ornaments or paint. The number of villages scattered throughout the land of the Papagos is about nineteen ; and the population of the entire tribe probably reaches 4000, of which 3000 live north of the Mexican boundary line, and perhaps 1000 south of it. So effectually do the warriors protect their homes that the Apaches never have the courage to penetrate far into their country, although they have quite depopulated the Mexican settlements bordering it on the east.

In nature, the productive and the destructive elements are everywhere found side by side ; and not only is this true as an abstract principle of actual existence, but there is not a creature without natural enemies who prey upon it and live by its destruction. Civilized man, however, although he lives by the destruction of life, animal as well as vegetable, takes care to reproduce by artificial means as much, if not more, than he destroys ; but the savage does not always do so ; and when he does not, this is surely a proof that he is *not* destined by Providence permanently to exist.

Most conspicuous amongst the latter class are the Navajos and Apaches of New Mexico and Arizona—the hereditary enemies of the cultivator of the soil, whether he be Aztec, Mexican, or Anglo-Saxon—the savages, by whose means the whole country has been nearly swept of its inhabitants, and changed from a fertile garden into a barren waste.

The Navajos, until lately, occupied a fine tract of country watered by the Colorado Chiquito, the Rio San Juan, and their tributaries, and the western branch of the Rio Grande. They were bounded on the north by the Ute nation, on the south by the Apaches, on the west by the Moqui and Zúñi pueblos, and on the east by the inhabitants of the Rio Grande valley. Although often placed under the head of Apaches, they are in every respect a different and a finer race. They are bold and defiant, with full lustrous eyes and a sharp, intelligent expression of countenance ; they had fixed abodes in their country, around which they raised crops almost rivalling those of the Pimas on the Gila : they carried one art (the weaving of blankets) to a state of perfection which, in closeness of texture and arrangement of colour, is scarcely excelled even by the laboured and costly seraphes

of Mexico and South America. I tried at Santa Fé to purchase some; but the prices were so enormous, averaging from seventy to one hundred dollars for choice specimens, that I refrained.

For love of plunder and rapine, these Indians have no equals. Their number, twenty years ago, was probably about twelve thousand; and while they left their wives and old men to plant, reap, attend to the stock, and make blankets, the braves spent their lives in traversing the whole country, carrying off the stock of the helpless Mexican farmers, and keeping the entire agricultural and mining population in a constant state of alarm. To give a slight idea of the depredations of these hordes, I may state that between August 1st, 1846, and October 1st, 1850, there were stolen by them, according to the report of the United States' Marshals, no less than 12,887 mules, 7,050 horses, 31,581 horned cattle, and 453,293 head of sheep. The official reports from New Mexico appeared to contain nothing but catalogues of depredations committed by the Navajos, or of similar deeds done by the Apaches; and not only was the valley of the Rio Grande swept over and over again of its stock, but the Pueblo Indians of Zúñi, and many other native towns, barely escaped destruction, and this, too, since the annexation. How many perished previously, who can tell?

Governor Charles Bent thus spoke of them in 1846:—"The Navajos are an industrious, intelligent, and warlike race of Indians, who cultivate the soil, and raise sufficient grain and fruits of various kinds for their own consumption. They are the owners of large herds, and flocks of cattle, sheep, horses, mules, and asses. It is estimated that the tribe possesses thirty thousand head of horses, mules, and asses. It is not rare for one individual to possess from five to ten thousand sheep, and four or five hundred head of other stock. Their own horses and sheep are said to be greatly superior to those reared by the Mexicans; but a large portion of their stock has been acquired by marauding-expeditions against the settlements of this territory. They roam over the country, between the waters of the river San Juan on the north, and those of the Gila on the south. This country is about 150 miles wide, consisting of high table mountains, difficult of access, affording them as yet effectual protection against their enemies. Water is scarce, and difficult to be found by those not acquainted with the country, affording them another natural safeguard against invasion. Their numbers are variously estimated at from one to two thousand families, or about fourteen thousand souls. The Navajos, so far as I am informed, are the only nation on the continent that, having intercourse with white men, is increasing in numbers. They have in their possession many prisoners (men, women,

and children) taken from the settlements of this territory, whom they hold and treat as slaves.”

Such was their condition in 1846; since then their history has been one long series of misfortunes. As far back as any information can be obtained about them, they have been at war with the Mexicans and white men, the system of reprisals being systematically carried out on both sides. The Mexicans of one settlement would collect together, and make a raid on a marauding band of Navajos, capturing all they could, not only in stock, but in women and children. The Indians would retaliate, not caring particularly whether it was the aggressors or some peaceful neighbours they attacked in return. This being the state of affairs, we find, even as early as the autumn of the first year of possession, that General Kearney (United States army), gave orders to Colonel A. W. Doniphan, then in California, to march against the Navajos—and to Governor Bent, advising him that “full permission should be given to the citizens of New Mexico to march in independent companies against these Indians, *for the purpose of making reprisals*, and for the recovery of property and prisoners.”

From this time until 1863 war has been unceasing with this hardy tribe. Their hand has been against every one, and every one's hand has been against them; even the Pueblos left their villages and joined the whites against them; and as they had actual property in corn-fields, flocks, and herds, they could not, like their wild neighbours, the Apaches, who lived by the chase and marauding only, altogether escape from the hands of the military. It was cruel work, however necessary.

I have spoken to many who helped to *humble* the Navajos. As soon as harvest time approached, the soldiers would enter their country year after year: they say that the corn-fields were splendid; but they cut them all down, and fired the district wherever they went, driving off sheep, sometimes to the number of seventy thousand in a single raid, and oxen also by thousands. When there were no crops to destroy, and no apparent enemy to be found, or flocks to drive off, the military would encamp at the different springs, and try by this means to destroy the remnant of their stock: but in this, for a long time, they were unsuccessful; for the Navajo sheep, probably from force of habit, could thrive if only watered once every third or fourth day; and thus it happened that when the troops had guarded a spring long enough, as they supposed, to prove that no Indians or flocks were in that district, and had left to go to another, the Navajos, who were quietly grazing their cattle in the secluded nooks amongst the hills hard by, came down to the spring and refreshed themselves with perfect impunity.

Year after year they boldly held out ; and plunder became to them a necessity of existence, for they had no other means of support. At last, however, this never-ceasing hostility reduced the whole tribe to utter destitution ; nor did they give up until they were literally starving. In 1863 the first large section of them (I believe about five thousand in number) delivered themselves up to the government. They were removed from their own country, and placed upon a large reservation on the Rio Pecos ; and old Fort Sumner, which had been abandoned, was re-established in the centre of the reservation, for the purpose of carrying out the design of the government towards them. Since then nearly all the remains of the tribe have delivered themselves up, and, to the number of about seven thousand five hundred, have been placed on the reservation. Mr. Ward is of opinion that a very small fraction indeed of this once powerful tribe is now at large in the country north of the Rio Colorado, and in Utah Territory ; but since, for years before they gave in, the advantage had been on the side of the settlers against the Navajos, he assures me that there are at the present time not less than two thousand captives in the hands of the Mexicans, who profess to bring them up, and to take care of them as members of their families and households.

As regards the present condition of the Indians on the Bosque reservation, I cannot do better than give a short quotation from the report of Colonel A. B. Norton (Superintendent of Indian Affairs in New Mexico) for the year 1866 :—" At Fort Sumner this tribe has about two thousand five hundred acres of land under cultivation, mostly in Indian corn, with an admirable system of irrigation. The water, however, is very poor in quality, and wood so scarce that it has to be hauled from twenty-five to thirty miles to the post, while the mezquit root, the only wood used by them for fuel, must soon give out. Add to this that the Comanches make constant raids upon them, to within a few miles of the fort, and, as they are very little able to protect themselves, this adds still more to their discontent. Of the state of health and morals of these Navajos, the hospital reports give a woful account. The tale is not half told, because they have such an aversion to the hospital that but few of those taken sick will ever go there, and so they are fast diminishing in numbers ; while the births are many, the deaths are more. Discontent fills every breast of this brave and light-hearted tribe ; and a piteous cry comes from all as they think of their own far-off lands, ' Carry me back, carry me back ! ' " They have had a severe lesson and a terrible punishment ; but when a railway traverses the country, they may with perfect safety be allowed to return to their own land, now

parched and desolate, but still so yearned for by these unhappy prisoners.

Without further investigation, I cannot hazard an opinion as to whether the Navajos are a branch of the town-builders or the true North-American redskins. They say themselves that they are related to the former; and their arts as well as their faces would, I think, rather tend to lead us to the same conclusion. Those figured at page 241 look far more like Southern than Northern Indians; and the woodcut is a good copy of a photograph.

While the Navajos spread terror and desolation through the north and east of New Mexico, the Apaches followed the same system of plunder in the southern part of the state and throughout Arizona and Northern Sonora, with this great difference—that amongst the former booty was their only object, and they spared life unless resistance was offered, but with the latter war to the death was, and still is, their undeviating practice. In battle the Navajo never stoops to scalp his fallen enemy, and many acts of true generosity are related of him; but the cowardly Apache creeps upon his victim like a snake in the grass: if he can capture him he invariably tortures him to death; but otherwise he scalps and mutilates him in the most horrible manner, and has never been known to show the smallest trace either of humanity or good faith.

Several independent though kindred tribes are rightly classed under the term Apaches; the following table gives their names, the localities in which they are usually encountered, and the probable population of each:—

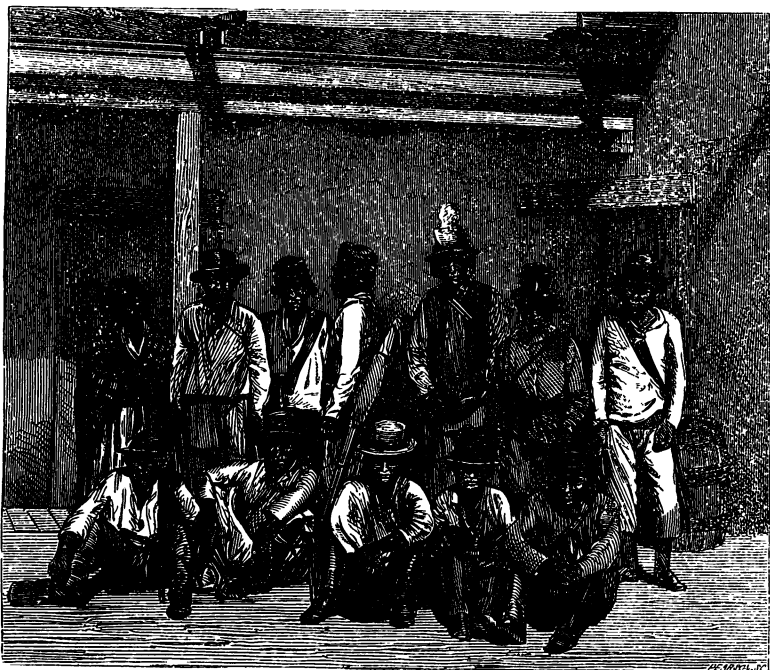
Names.	Districts.	Populations.
Jicarrilla Apaches.	Maxwell's reservation and Toas district	. 500
Mescalero ,,	Mountain south of Fort Stanton	. . . 525

MOGOLLON TRIBES, COMPRISING THE

Miembres Apaches.	Miembres Mountains	400
Coyotero ,,	Sierra Blanca of Arizona	700
Pinal ,,	Pina-leño Cordillera	2000
Tonto ,,	Between the Rio Salinas and Verde	800
Chi-ri-ca-hui,,	Chi-ri-ca-hui Mountains	500

The first of these tribes is now quite harmless; and as its members are too few and cowardly to hold their own against the other tribes, they willingly submit to being fed and taken care of at the expense of the government. The second tribe was formerly a very warlike one, and it is chiefly owing to its ravages that the fertile valley of the Rio Grande, from San Antonio, north of Fort Craig, to La Mesilla, a distance of over one hundred miles, is now an uninhabited waste. War, disease, and

scarcity of food have of late years so thinned their ranks that the government succeeded a short time ago in collecting them together and placing them on the Bosque reservation with the Navajos. As these tribes were sworn enemies, they did not long live together; for on the night of November 3, 1866, the Apaches deserted, and have since that time been committing depredations on the government stock, and murdering and plundering the settlers so far north as Los Vegas and Galistro. We heard much of their ravages while passing through that district.



All the Mogollon bands are still at large. They mostly inhabit the vast region formed of lofty tablelands and mountain-ranges in which the headwaters of the Rio Gila rise; and from these fastnesses, still unexplored, they have for ages been making raids upon their more civilized neighbours on all sides of them*.

[* Some of the depredations of the Miembres Apaches, under their chief, Mangos Colorados, were given in detail, but need not be recapitulated here.—Ed.]

A very characteristic tragedy was perpetrated at Fort Bowie while I was there, by Cachees's band of Chi-ri-ca-hui Apaches.

It is only necessary here to say a few words about the remaining subtribes—the Coyotereros, Pinals, and Tontos. Very little is known about themselves, far too much about their ravages. Their numbers are variously estimated; but the general belief is that they are not numerous. They occupy the centre of the Apache country, and the few attempts as yet made to "clear them out" have resulted in complete failure. The commander at Camp Grant told me that two years ago he made a raid into their country, but before he had gone many miles he found that his enemies were gathering around him in such numbers that his small force of fifty soldiers had to beat a rapid retreat. One of our parties had a terrible fight with the Tonto Apaches in Northern Arizona.

The favourite field for plunder during the last century has been Northern Sonora. The Apaches seem never to have lived there; but their custom was to descend in bands along the whole length of the Pina-leño and Chi-ri-ca-hui Mountains, which, so to speak, form a bridge 200 miles long across the Madre plateau from the mountains north of the Rio Gila to the Sierra Madre of Mexico.

The Spaniards protected their outlying provinces from these hordes by a complete system of military posts from San Antonio, in Texas, to the Pacific. These were:—along the Rio Grande, the Presidio de Rio Grande, San Carlos, Presidio del Norte, and San Eleazario; across the state of Chihuahua, Carrizal, Cayome, Galeana, and Janos; and across Northern Sonora followed, in close succession, the Presidios of Babispe, Fronteras, Bacuachi, Santa Cruz, and Tubac, reaching to the outskirts of Papago country and the Sonora desert. Thus the Spanish miners and rancheros were protected, and the country south of these limits became rich in flocks, herds, and productive mines, while the population increased with great rapidity. But as the power of Spain declined, and the central government at the city of Mexico degenerated into a chaos of contending factions, the troops which garrisoned these frontier stations were gradually withdrawn, the grand military system, which had so effectually done its work, was allowed to fall into decay, and most of the presidios were relinquished altogether.

The Apaches were not long in discovering the weakness of their wealthy neighbours, and year by year their raids became more numerous, and their ravages more destructive. At first the stock of the outlying rancheros fell a prey to the enemy; and although probably but a small proportion of the vast herds which formerly occupied the rich grazing-regions of North-

eastern Sonora and Northern Chihuahua were really carried off by the red men, the rancheros had to fly for their lives, and leave their cattle to their fate. This accounts for the herds of wild cattle and horses which are still to be found in those districts. Then the miners began to be molested, their stock, chiefly mules, driven off, and they themselves so terrified that they could not be induced to remain. When the country districts were cleared, the little towns next formed the chief object for attack. The Apaches would lie concealed for days, until an opportune moment had arrived for capturing the cattle and plundering the place. The people at last became so terrified that, if they heard of a band of Apaches fifty miles off, they very frequently left everything and fled. Against such an enemy they were almost powerless; for the mountain-fastnesses from which he came lay far away to the north, and anything approaching an open fight was always avoided by him.

This state of things, in fine, going on year after year, has entirely depopulated that country. Its ruin was almost complete before the treaty of 1854 had finally settled the question of boundary-line between Mexico and the United States; but one of the chief stipulations of the treaty was that the latter government should keep the Apaches in their own country, and prevent them from making any more raids into Mexican territory. Although this was promised, it could not be accomplished; for the United States military have, up to the present time, been almost powerless in their attempts either to "wipe out" or to restrain these marauding hordes. They have, as we shall see in many of the incidents to be related, neither protected their own subjects on their own soil, nor sheltered the helpless Mexicans across the border.

But the Apaches do not lay waste Northern Sonora as they formerly did, chiefly because there is now nothing to plunder; all is desolation. Destiny, however, seems to be doing what the government has failed to do; it is destroying the Apache nation. Although very few are yearly killed in fight, and the white man has not as yet penetrated into the heart of their country, still they are dying out fast; already the total population, as far as it can be estimated, is so small as to appear at first to be beneath our notice; but the scalp of many a brave settler will yet be taken before these blood-thirsty savages are crushed.

In the region lying between the Rio Verde, which is about the limit of the Apache country and the Rio Colorado, two tribes, few in number, and of the lowest type of humanity, are met with. These are the Walapais (Hualpais) and the Yampas. The latter chiefly inhabit little strips of marshy land at the

bottom of the deep cañons, which debouch upon the Colorado Cañon. Both tribes were encountered by our parties about the 35th parallel; they are comparatively harmless, and much resemble the Pai-utes of the Great Basin. The valleys of the Colorado, from the end of the Black Cañon almost to the head of the gulf, are inhabited by Indian tribes who occupy an intermediate position between the semicivilized Pueblo Indians and the wild Apache races. They have for some time kept peace with the whites; but contact with them appears to be rapidly hastening their extinction.



Mojave Indians.

As there is no special interest attaching to these savages I will leave the accompanying woodcut, copied from a photograph taken at Fort Mojave, to speak for itself. The Mojaves are the largest tribe, and once numbered ten thousand.

I must now say a few words about the ruins which are to be found scattered throughout New Mexico, Arizona, and Northern Mexico. There is scarcely a valley in the Rio Grande basin in which the stone or adobe foundations of villages are not to be found; there is scarcely a spring, a laguna, or a marsh upon the

plateau which is not overlooked by some ruined fortress. Usually these relics crest a commanding eminence, not always in close proximity either to the fertile land which supported the community, or even to the spring which supplies them with water. If a stream runs near them, the remains of acequias (or irrigating canals) are generally to be found. There are many places, however, where cultivation had been successfully carried on without them, the rainfall alone being relied upon; while some ruins show signs of reservoirs and terraces similar to those still in use amongst the Moquis.

The ruins may be classed under three heads:—

1st. Ruins of many-storied Indian strongholds.

2nd. Ruins of buildings evidently constructed under Spanish rule.

3rd. Ruins the foundations of which alone remain.

East of the Rio Grande there are at least four ruined towns of the first order deserving of special notice; these are the ruins of Pecos, Quarra, Gran Quivera, and Abo; all, however, contain ruins of Spanish as well as Indian origin. The early Spaniards tell us that Pecos was a fortified town of several stories. It was built upon the summit of a mesa which juts out into the valley of the stream of the same name, and overlooked the lowlands for many miles in both directions. The only conspicuous buildings amongst the ruins are the Spanish church and the Mexican temple. For probably a century the two religions flourished side by side; the incense ascended from the altar of the one, and the fire of Montezuma burned day and night in the estufa of the other. The church is a cruciform adobe structure, the greater part of the walls of which are still standing. Montezuma's church, the ruins of which are almost continuous with those of its rival, is much more decayed; it shows signs of having been at least three stories in height; and in the centre the large circular estufa is quite perfect.

The pueblo was called by the early Spaniards "Tiguex," and was the chief town of a district called by the same name. According to Indian tradition, it was built by Montezuma himself on his way southward from Toas; he placed his sacred fire in the estufa, and warned his people that death would come upon them if they allowed it to go out. Before leaving them he took a tall tree and planted it in an inverted position, saying that when he should disappear a foreign race would rule over his people, and there would be no rain. "They were not to lose heart, however, under the foreign yoke, nor to let the fire burn out in the estufa; for when the time came in which the tree should fall, men with pale faces would pour into the land from the east and overthrow their oppressors, and he himself would return to build up his

kingdom ; the earth would again become fertile and the mountains yield abundance of silver and gold. Then Montezuma departed and travelled southward, spreading pueblos far and wide, until he reached the city of Mexico, where he lived until the enemy, in the form of the Spaniards, arrived, when he disappeared." The Pueblo Indians say that Montezuma's prophecy has been literally fulfilled. Soon after Montezuma returned to the Great Spirit, the enemy, in the form of Spaniards, came, conquered, and enslaved them. Although they could not shake off the oppressors, still they kept the holy fire burning, and tried to dwell in peace with all men *. The Spaniards added many buildings to the town, and lived there amongst them until about the middle of the last century, when the wild Indians of the mountains attacked and desolated Pecos, driving away and murdering its inhabitants. Nevertheless, amidst the havoc and plunder of the place, a faithful few amongst the Indians managed to keep the fire burning in the estufa, until at last the deliverers with "pale faces poured in from the east," and the tree at Pecos fell to the ground as the American army entered Santa Fé. Then the little remnant of the tribe, which in 1808 only numbered 135 souls, left the ruined fortress and brought the sacred fire with them to the pueblo of Jemez, to which place their companions had migrated years before. Here they were kindly received by the Indians of that pueblo, who helped them to build acequias and houses, and to sow and gather in their crops ; droughts no longer desolate the land, but year after year copious showers still bring wealth and happiness to the chosen people of the Great Prince.

I passed Pecos on my way to Santa Fé. Mr. Eicholtz's party saw the ruins of Quarra and Abo, on their journey through Abo Pass, and left the Gran Quivera a few miles to the eastward ; for these three pueblos lie within a radius of ten miles.

The ruins of Quarra consist, like those of Pecos, of a church, a large Aztec building, which was probably several stories high, although now a heap of stones and rubbish, and numerous foundations of smaller houses, probably of Spanish or Mexican origin. The church is built of red sandstone, in the form of a cross ; the length of nave and chancel is one hundred and forty feet, that of the transept is fifty ; the widths respectively are thirty-three to eighteen feet ; the walls are about two feet thick and sixty feet high.

At Abo there is also a ruined church, cruciform in shape, the

* "A Mr. Vaughan, who lived near Pecos, at Tagique, for twenty years before the Americans entered the country, told Lieutenant Abbot that he had seen the sacred fire."—*Senate document*, No. 41, Appendix vi.

arms being respectively 27 and 129 feet; it is built of small, beautifully cut stones, placed together with the utmost nicety. Other extensive ruins are scattered around it.

At Gran Quivera there are extensive ruins of Spanish buildings, having upon them the arms of different families; but there are other ruins undoubtedly of Indian origin, which fully carry out the statement of the historian Venegas and others, that this ancient pueblo was a large fortress, consisting of seven terraces, rising in steps one from the other. The remains of large acequias are to be seen in the vicinity both of Gran Quivera and Quarra. So much for the ruins of the Rio Grande basin.

There are not, to my knowledge, any ruined pueblos as far north as the main valley of the Rio San Juan; but there are several upon the two most southern tributaries, the Rio de Chelly and the Cañon de Chaco. The most remarkable are the pueblos Pintado, Una Vida, Wegegi, Hungo Pavie, and Bonito, all on the latter stream. Besides these there are five others in a more ruined state. The Pueblo Pintado has three stories, its whole elevation being about 30 feet. The walls are built of small flat slabs of grey fine-grained sandstone, two inches and a half thick, and are put together with much art and ingenuity by means of a kind of mortar made without lime. At a distance they have the appearance of mosaic work. The thickness of the outer wall of the first story is one yard at the base, diminishing at each successive story, until the top wall scarcely exceeds one foot. There are, as usual, no external openings in the ground-floor. The length of the edifice is 390 feet; the ground-floor contains fifty-three rooms, which open into each other by means of very small doors, in many instances only thirty-three inches square. The floors are made of rough beams, over which transverse cross beams are laid, and above all is a coating of bark and brushwood covered over with mortar. The wood appears to have been cut with some blunt instrument.

The ruins of Wegegi are similar to those of Pintado, being 690 feet in length, and having ninety-nine rooms on the ground-floor. The Pueblo Una Vida is no less than 984 feet long, and the Pueblo Bonito is still more extensive. The estufa of the latter is very large, and in a fair state of preservation. It is 180 feet in circumference; and the walls are regularly formed of alternate layers of small and large stones, held together with mortar.

Another pueblo, Chetho Kette, measures 1300 feet in circumference, and was originally four stories high. It has the remains of one hundred and twenty-four rooms on the first story. The most perfect of the ten ruined pueblos discovered by Lieutenant Simpson in the Cañon de Chaco is that of Hungo Pavie (or the

Crooked Nose). Its circumference, including the enclosed court, is 872 feet. It faces, as usual, the cardinal points, and contains one estufa, placed in the centre of the northern wing of the building.

The accompanying engravings are taken from Simpson's 'Navajo Expedition,' and show at a glance the form of these structures. The terraces of Hungo Pavié are here represented as facing the central court. This may have been the plan adopted in many pueblos, but not in all. At Zuñi, for instance, the terraces face outwards and rise in steps towards the centre; and while the ruins in the Cañon de Chaco seem to show that there the outermost wall was the highest, many ruins elsewhere prove that the opposite was often the case. Thus two forms were probably in use: the one rose from without in steps towards the centre of the building; the other faced the courtyard, and was encircled by its highest wall.

One or more estufas have been discovered in each pueblo. Some are rectangular, others circular. There are similar ruins in the Valle de Chelly. The Navajo Indians, in whose country these pueblos are situated, say, I am told, that they were built by Montezuma and his people at the time of their emigration from north to south, and shortly before their dispersion on the banks of the Rio Grande and over other parts of Mexico.

The country occupying the fork between the Great Colorado and the Colorado Chiquito forms a part of that vast tableland the Colorado plateau, through which both these streams pass in deep cañons.

The land is deeply eroded, being cut up into lofty mesas of variable size, and is very arid and worthless. The seven Moqui villages crest the edges of some of the mesas which form the south-eastern escarpment of the Colorado plateau. Further to the north-west, and nearer the Colorado, there is another group of pueblos in ruins, larger than those of the Moqui Indians, but situated, like them, on the flat summits of mesas, containing estufas, reservoirs, terraces, aqueducts, and walls at least four stories high. No trace has as yet been found of their former inhabitants.

Next we come to the ruins on the Colorado Chiquito and its southern tributaries. There are ruins upon El Moro, ruins north of Zuñi, Old Zuñi, and others along the Zuñi River; ruins, also, on the Rio Puerco of the west, amongst which our parties found abundance of pottery; and there are most extensive ruins in the main valley, both above the falls and between the falls and the entrance of the cañon of the Chiquito, scattered along a fertile basin at least a hundred miles in length. At Pueblo

Creek the remains of several fortified pueblos were found crowning the heights which command Aztec Pass; but west of this point (longitude 113° west) no other ruins have as yet been discovered.

Leaving the basin of the Colorado Chiquito, we pass southward to that of the Rio Gila, where the most extensive ruins of all are to be found. Some fine streams enter this river on the north, draining a country very little known, but of great interest, and containing many fertile valleys. The chief of these tributaries are the Rios Preto, Bonito, San Carlos, Salinas, and Rio Verde (which latter two unite before joining the Gila, twelve miles from the Pima villages), and, lastly, the Agua Fia. The great New Mexican guide, Leroux, started northward from the Pima villages in May 1854, crossed over to the junction of the Salinas with the Rio Verde (also called Rio de San Francisco), ascended the latter stream, and crossed from it to the 35th-parallel route along the Colorado Chiquito. He represents the Rio Verde as a fine large stream, in some places rapid and deep, in others spreading out into wide lagoons. The ascent was by gradual steppes, stretching out on either side into plains which abounded in timber—pine, oak, ash, walnut, sycamore, and cotton-wood. The river-banks were covered with ruins of stone houses and regular fortifications, which were evidently the work of a very civilized race, but did not appear to have been inhabited for centuries. They were built upon the most fertile tracts of the valley, where were signs of acequias and of cultivation. The walls were of solid masonry, of rectangular form, some twenty or thirty paces in length, and from ten to fifteen feet in height. They were usually of two stories, with small apertures or loopholes for defence when besieged, and reminded him strongly of the Moqui pueblos. The large stones of which these structures were built must often have been transported from a great distance. At one place he encountered a well-built fortified town, ten miles distant from the nearest water.

Other travellers and prospectors report many ruined pueblos along the Salinas, others on the San Carlos, and several very extensive ones in the fertile Tonto basin, which is drained by a tributary of the Salinas. Of many of the ruins on the Gila itself, and in the valleys of its southern tributaries, I can speak from personal knowledge. A little west of the northern extremity of the Burro Mountains, the Rio Gila leaves the Santa Rita and other ranges, and meanders for a distance of from seventy to one hundred miles through an open valley of considerable width. This long strip of fertile bottom-land is studded throughout with deserted pueblos, which at the present time belong almost entirely to the third class, viz. those of which the foundations

alone mark the localities. It is impossible to travel more than a mile or two along the margin of the lowlands without encountering them; and one of our guides, who knew the ground well, told me that at least 100,000 people must at one time have occupied this valley. The ruins follow the river quite to the mouth of the first cañon by which the Gila cuts through the Pina-leño Mountains.

In the cañada of the Aravaypa, on the western side of this range, I examined the ruins of two pueblos, one being a fortification covering the top of a steep hill which guarded the entrance to the Aravaypa cañon. All along the San Pedro valley, through which Mr. Runk's party travelled for 160 miles, ruined pueblos were frequently met with. Amongst them the remains of pottery, such as is in general use amongst the town Indians and Mexicans, were picked up in great abundance. Remains of acequias also were very numerous. Between Camp Grant, where I left my party to enter Old Mexico and the Pima villages, the mesas bordering on the Gila are pretty thickly studded with ruins; but further west than the confluence of the Rio Verde no more traces of pueblos are to be found.

Two good-sized ruins are situated near the Pima villages; one is known as Casa Montezuma, the other as Casa Grande. Casa Montezuma, also called Casa Blanca, consists of the remains of four large houses, one of which is tolerably perfect as a ruin. Around it are piles of earth showing where others had been; and although ten miles distant from the river, all the intervening space is intersected by acequias, and was no doubt once under cultivation. The chief ruin is four stories high, and forty feet by fifty wide; the walls face the cardinal points and have four estufas four feet by two in size. The rafters inside were almost entirely destroyed by fire; but, as far as could be seen, they had been very roughly hewn. The walls consisted of brick, mortar, and pebbles, smoothed without and plastered within. The arrangements of the rooms, the presence of doors, and the absence of terraces would lead one not to attribute this building to Aztec origin. The Pimas, however, account for it thus:—Long ago a woman of exquisite beauty ruled over the valleys and the region south of them. Many suitors came from far to woo her, and brought presents innumerable of corn, skins, and cattle to lay at her feet. Her virtue and determination to continue unmarried remained alike unshaken; and her store of worldly possessions so greatly increased that, when drought and desolation came upon her land, she fed her people out of her great abundance and did not miss it, there was so much left. One night, as she lay asleep, her garment was blown from off her breast, and a dew-drop from the Great Spirit fell upon her bosom, entered her

blood, and caused her to conceive. In time, she bore a son, who was none other than Montezuma, and who built the large *casas* and all the other ruins which are scattered through the land. After instructing his people in the arts of civilization he departed for the south and then disappeared.

Casa Grande is situated a little below the junction of the Rio Verde and the Salinas. It is a rectangular ruin, 220 feet by 68, whose sides face the cardinal points. The highest walls are, as usual, to be found in the centre of the pile, and they appear to have been three or four stories high.

Besides abundance of broken pottery, we found sea-shells (often pierced and otherwise converted into ornaments) about the ruins which skirt the Gila and neighbouring streams, showing that these people must have had some intercourse with tribes living along the coast. These shells may have been brought by tribes inhabiting the Lower Colorado across the Sonora Desert, to exchange for food, clothing, and other Pima manufactures; but I think it most probable that the kindred race, the Papagos, were the chief venders of shells; for they are great traders, and wander through all Northern Sonora, from the Gulf of California to the Sierra Madre, and even now supply the scanty population of this region with sea-salt obtained from some salt-lakes near the coast.

The Pimas themselves state positively that at one time they were a great and powerful nation, living in houses similar to the ruins found on the Gila; but after the destruction of their kingdom they travelled southward, and settled in the valley where they now dwell; fearing lest they should again become an object of envy to a future enemy, they were content ever afterwards to live in huts.

Lastly, I would mention one more cluster of ruins, which, although they lie south of the boundary-line of the United States, belong without doubt to the same class as those I have been considering; these are the *Casas Grandes* and *Casa de Janos*, situated on the Rio Casas Grandes, which flows northward into the Laguna de Guzman in north-western Chihuahua. The former, according to the historian Clavegero, is similar in every respect to the ruined fortresses of New Mexico, consisting of three floors, with a terrace above them, and without any entrance to the ground-floor. The doors led into the buildings on the second floor, so that scaling-ladders were necessary. A canal, says Dr. Wislizenus, conveyed water from a spring to this place. A watch-tower, probably Casa Janos, stands two leagues to the south-west of it, commanding a wide extent of country; and along the stream are many mounds in which have been found earthen vessels, painted white, blue, and violet, also weapons of stone,

but none of iron. The following particulars are from Bartlett's personal narrative :—"The ruins of Casas Grandes face the cardinal points, and consist of fallen and erect walls, the latter varying in height from five to thirty feet, projecting above the heaps of ruins which have crumbled to decay. Were the height estimated from the foundations, it would be much greater, particularly of those of the centre part of the building, where the fallen walls and rubbish form a mound twenty feet above the ground; if, therefore, the highest walls now standing have their foundations on the lowest level, their probable height was from forty to fifty feet. I conclude that the outer portions of the building were the lowest, about one story high, while the central ones, judging from the height of the walls now standing, and the accumulation of rubbish, were probably from three to six stories. Every portion of the building is made of adobe, which differs from that now made by the Mexicans in that the blocks are very much larger, being fourteen or sixteen inches long, twelve inches wide, and three or four thick; the others are usually twenty-two inches in thickness, and three feet or more in length. Gravel was mixed with these large adobes, which greatly increased their hardness, but no straw was used. The building consists of three masses, united by walls, of probably but one story, forming perhaps only court-yards; they are now weather-beaten down to long lines of mounds.

"The entire edifice extends from north to south 800 feet, and from east to west 250. The general character is very similar to Casas Grandes near the Pima villages and the ruins on the Salinas. Not a fragment of wood remains; many doorways are to be seen, but the lintels have gone, and the top has in most cases crumbled away and fallen in.

"Some of the apartments arranged along the main walls are twenty feet by ten, and connected by doorways, with a small enclosure or pen in one corner, between three and four feet high. Besides these there are many other exceedingly narrow apartments, too contracted for dwelling-places or sleeping-rooms, with connecting doorways, and into which the light was admitted by circular apertures in the upper part of the wall. There are also large halls; and some enclosures within the walls are so extensive that they could never have been covered with a roof. The lesser ranges of buildings which surrounded the principal one may have been occupied by the people at large, whose property was deposited within the great building for safe keeping. Although there appears to be less order in the *tout ensemble* of this great collection of buildings than in those further north, the number of small apartments, the several stages or stories, the inner courts, and some of the minor details resemble in many

respects the large edifices of the semicivilized Indians of New Mexico."

The builders showed much sagacity in their choice of so fine a region for agricultural purposes. There is none equal to it from the lowlands of Texas, near San Antonio, to the fertile valleys of California, near Los Angeles; and, with the exception of the Rio Grande, there is not one valley equal in size to that of the Casas Grandes, between those of Eastern Texas and the Colorado of the west. The water of the Rio Casas Grandes, unlike that of the Rio Grande, Pecos, and Colorado, is clear, sweet, and sparkling. Not more than one hundred yards distance is another ruin, about fifteen feet square. Garcia Conde says that these edifices were known to have had three stories and a roof, with steps outside, probably of wood. Heals repeats the story of the Aztec emigration, and states that this was the third stopping-place of that people on their way from the north to the city of Mexico.

I met with no Indian ruins in Sonora, nor have I heard of any other similar ones either there or in Chihuahua.

Let us now try to discover, from the writings of a few of the earliest Spanish explorers, what kind of people they found on their discovery of the country. I think I have said enough about the small remnant of civilized Indians still remaining, and of their natural enemies the wild and untamable savages, to prove what a striking difference exists between them. I have also probably given a longer catalogue of ruins than the patience of my reader has been able to bear; the question, however, of the greatest interest still remains to be answered, viz., Who were the builders of these ruins, and why have they disappeared? The early Spaniards throw considerable light upon this question; and I think, after hearing what they have to say, we may draw a fair conclusion for ourselves. I have neither had time nor opportunity to make researches amongst the long-forgotten archives of Spain or Mexico; but Lieutenant A. W. Whipple has discovered, in Colonel Peter Force's extensive library at Washington, some very interesting matter; a little more material has been added from other sources; and I collected many additional facts at Santa Fé during my fortnight's visit there. I may also add that the second, third, and fourth letters of Fernando Cortes to the Emperor Charles V. were translated in America by George Tolson (New York, 1843, 8vo), and that the fifth letter has just appeared in the '*Journal of the Hakluyt Society*,' by Don Pascual de Gayangos (1868). The first letter has not been translated, because its authenticity is still doubted.

Early in the spring of 1526 (ninety-four years before the

landing of the Pilgrim Fathers in New England, and thirty-four years after the shores of St. Salvador delighted the eyes of Columbus) Don Joseph de Basconzales crossed the centre of Arizona towards the Great Cañon and penetrated at least as far as Zuñi. No record remains of this, the first expedition into that country, but the bare record of the fact carved on the side of "El Moro;" for none of the expedition ever returned to tell of their adventures. They either perished by the hands of the Indians, or met a still more miserable end amongst the labyrinths of chasms still further north, across which nought living but the birds can successfully pass.

Those who remember the wonderful achievements of Cortez in Mexico may call to mind one Pamphilo Narvaez, who in 1520 was despatched by Velasquez, Governor of Cuba, with a detachment to arrest Cortez in the midst of his victories, and to deprive him of authority. Cortez was then in the city of Mexico, beset with many and appalling difficulties. Nevertheless he marched at once with a few trusted comrades towards the coast, attacked Narvaez with one furious onslaught, overcame him, and took his whole detachment prisoners. "Esteem it great good fortune," said Narvaez, "that you have taken me captive." Cortez disdainfully replied, "It is the least of the things that I have done in Mexico." This was the Narvaez who afterwards obtained from Charles V. the right to make extensive conquests and explorations north of the Gulf of Mexico.

In the winter of 1527-28 he fitted out an expedition, consisting of four hundred men, eighty horses, and five ships, left San Domingo, and, after a prosperous voyage, reached the coast of Florida about the middle of April. There, while carrying on explorations in the interior, he was deserted by his squadron, and obliged to put out to sea in five rude boats made by his famished soldiers. His usual bad fortune, however, followed him; he was wrecked on one of the islands at the mouth of the Mississippi, and perished with all his companions save three: these were Cabeza de Vaca (treasurer and second in command), Esteva Dorantes (an Arabian negro), and Castillo Madonado. Vaca was a man of letters, and of great strength of character, and boldly determined at all hazards to advance into the unknown regions before him, and strike, if possible, the Pacific coast. He was taken prisoner, however, by the wild Indians of Southern Texas, and remained a captive for six years. After that time the three adventurers made their escape; and after travelling for twenty months in a north-westerly direction, amongst hostile tribes and over arid deserts, they struck the Canadian River. This they followed in a westerly direction, and passed over the dividing ridges into the valley of the Rio Grande. After wan-

dering from pueblo to pueblo, they at last made their way, in the month of May 1538, to the village of San Miguel, in Sonora, scarcely sixty leagues from the Pacific coast, and finally reached the city of Mexico. Vaca returned next year to Spain, and laid before the King a thrilling narrative of his adventures. His description of the large towns with lofty houses containing many stories, which he had heard of in the Rio Grande valley, of the civilized Indians who cultivated maize and adorned themselves with precious stones, and of the mineral wealth which he had discovered soon led to the organization of a fresh expedition.

On the 7th March 1539, Friar Marco de Nica started from the town of San Miguel, in the province of Culiacan (Sinaloa), on his journey northward, according to instructions received from Don Antonio de Mendoc a, Viceroy of New Spain. His companion was Friar Honoratus; and he carried with him a negro named Stephen, and certain Indians of the town of Cuchillo, whom the Viceroy had made free. He proceeded to Petatlan, where he rested three days, and left his companion, Honoratus, sick. Thence, "following as the Holy Ghost did lead," he travelled twenty-five or thirty leagues, seeing nothing worthy of notice, saving certain Indians from "the Island of Saint Iago," where Fernando Cortez of the valley had been. From these he learned that among the islands were "great stores of pearls"*. Continuing through a desert of four days' journey, accompanied by the Indians of the islands and of the mountains through which he passed, he found other Indians, who marvelled to see him, having no knowledge of any Christians, or even of the Indians from whom they were separated by the desert. They entertained him kindly, and called him "Hayota," in their language signifying a man come from heaven†. He was told by these people, whom Vasquez Coronado had named Cora ones, that four or five days' journey within the country, at the foot of the mountains, "there was a large and mighty plain, wherein were many great towns, and people clad in cotton." And when he showed them certain minerals which he carried, "they took the mineral of gold," and told him "that thereof were vessels among the people of that plain, and that they carried certain round green stones hanging at their nostrils and at their ears, and that they had

* These were probably Yaqui Indians, who still visit the Pearl-Islands along the opposite shore (Lower California) in order to carry on their occupation of diving for pearls. They are great travellers, and would therefore be valuable guides.

† These were Opita Indians, occupying the valley either of the Rio Sonora or its main tributary the Rio de San Miguel. They received me as hospitably as they did Father Marco, and are the best-looking Indians I have ever seen.

certain thin plates of gold wherewith they scrape off their sweat, and that the walls of their temples are covered therewith." But as this valley (previously called a plain) was distant from the sea-coast, he deferred the "discovery thereof" until his return*.

Marco de Niça travelled three days through towns inhabited by the people of the Coraçones, and then came to a "town of reasonable bigness" †, called Vacupa, forty leagues distant from the sea. The people of Vacupa, he states, showed him "great courtesies," and gave him "great store of good victuals, because the soil is very fruitful and may be watered." Here the negro Stephen was sent in advance to reconnoitre. At the end of four days Father Marco received a message from Stephen, stating that wonderful accounts had been told him of a great city, called Cevola, thirty days' journey distant. The negro pushed on without waiting as he was ordered, and succeeded in making the discovery of that people, who finally killed him.

Upon the same day that Nica received these messages from Stephen, there came to him three Indians of those whom he called Pintados, because he saw their faces, breasts, and arms painted. "These dwell further up into the country, towards the east, and some of them border upon the seven cities" ‡. With these Pintados he departed from Vacupa upon Easter Tuesday; and having travelled three days northward, the way that Stephen had gone before him, he was informed that a man might travel in thirty days to the city of Cevola, which is the first of the seven. He was told also that, besides the seven cities, there were three other kingdoms, called Marata, Acus, and Totonteaç. He asked of these Indians why they travelled to Cevola, so far from their houses. They said that they went for turquoises, ox-hides, and other things, which they received in payment for labour in tilling the ground §. They described the dress of the inhabitants of Cevola to be "a gown of cotton down to the foot, with a button at the neck, and a long string hanging down at the same, and that the sleeves of these gowns are as broad beneath as above" ||. They gird themselves with girdles of turquoises ¶; and besides

* These "great towns" were probably situated in the Casas Grandes valley (a description of some of the ruins of which has been given), and, no doubt, were famous cities amongst the Indian tribes.

† "Magdalena, on the Rio de San Miguel."—*Whipple*.

‡ Without doubt these were Papagos.

§ A strong proof that they were Papagos, and not Pimas or any other tribe.

|| "This description is simply that of a Pima cotton blanket, thrown over the shoulders and pinned by a wooden button at the neck. The natural folds of this garment would produce 'sleeves as broad beneath as above.'"—*Whipple*.

¶ Probably Pima or Zuñi belts, ornamented with green stones.

these, "some wear good apparel, others hides of kine*, very well dressed." The Pintados carried certain sick folks to see him, that he might heal them, and the invalids sought to touch his garments for that purpose.

He continued his journey five days, always finding inhabited places, great hospitality, and many "turquoises" and ox-hides. He then understood that after two days' journey he would find a desert where there was no food. Before he reached this desert, he arrived at a very pleasant town, by reason of great stores of water conveyed thither to water the same†. Here he met with many people, both men and women, clothed in cotton, and some covered with ox-hides, "which generally they take for better apparel than that of cotton"‡. "All the people of this village," he states, "go in *caconados*—that is to say, with turquoises hanging at their nostril and ears, which turquoises they call *cacona*"§.

The "lord of this village" and others visited him "apparelled in cotton," "in *caconados*," and each with a collar of turquoises about his neck. They gave him conies, quails, maize, and nuts of pine trees, and offered turquoises, dressed ox-hides, and fair vessels to drink in, which he declined. They informed him that in Totontec was a great quantity of woollen cloth, such as he himself wore, made from the fleeces of wild beasts. These beasts they told him were about the same size as two spaniels which Stephen carried with him.

The next day he entered the desert; and when he was to dine, he found bowers made and victuals in abundance by a river-side||. Thus the Indians provided for him during four days that the "wilderness" continued. He then entered a valley¶, very well inhabited with people, who were dressed also in cotton robes, with turquoises pendent from their ears and nostrils, and numerous strings of the same encircling their necks.

Through this valley, which was inhabited by a "goodly people," he travelled five days' journey**. The country was "well watered

* Buckskin or buffalo robes.

† This was probably St. Xavier del Bac, situated in a rich and fertile valley, watered by acequias from the Santa Cruz River.

‡ If allowed for "ox-hides" to read *buckskin*, the account will apply to the Papagos and Pimas of the present day.

§ It is usual for all the principal Indian chiefs of the Gila and Colorado, as well as those of Zuñi, to wear blue stones pendent from the nose.

|| This "river in the desert" is probably the stream which at times flows from the Cañada del Oro, receiving all the western drainage of the Santa Catarina Mountains, and, like the Río Santa Cruz, becomes lost in the desert.

¶ This was the valley of the Río Gila.

** "He must have crossed over the Salinas (Río Azul) and ascended that river. It is surprising that he makes no mention of large buildings or ruins upon its banks."—*Whipple*.

and like a garden," "abounding in victuals," "sufficient to feed about three thousand horsemen." The boroughs and towns were from a quarter to half a league long. Here he found a man born in Cevola (Zuñi), having escaped from the governor or lieutenant of the same; "for the lord of the seven cities liveth and abideth in one of these towns called Ahacus [Acoma], and in the rest he appointeth lieutenants under him." "This townsman of Cevola is a *white man* *, of good complexion, somewhat well in years, and of far greater capacity than the inhabitants of this valley, or those left behind." Friar Marco thus describes Cevola *from report* :—"It is a great city, inhabited by a great store of people, and having many streets and market-places; in some parts of this city there are certain very great houses, five stories high, wherein the chief of the city assemble themselves at certain days of the year. The houses are of lime and stone; the gates and small pillars of the principal houses are of turquoises; and all the vessels wherein they are served and other ornaments of their houses are of gold. The other six cities are built like unto this, whereof some are bigger, and Ahacus is the chiefest of them. At the south-east there is a kingdom called Marata †, where there were wont to be many great cities, which were all builded of houses of stone, with divers lofts. And these have and do wage war with the lord of the seven cities, through which war the kingdom of Marata is for the most part wasted, although it yet continueth and maintaineth war against the other.

"Likewise the kingdom of Totontec ‡ lieth towards the west—a very mighty province, replenished with infinite store of people and riches; and in the said kingdom they wear woollen cloth, made of the fleece of those beasts previously described; and they are a very civil people." He told also of another kingdom, called Acus §. Here they showed him a hide half as big again as the hide of an ox, which they said belonged to a beast

* "It is remarkable that at the present day many of the Indians of Zuñi are white. They have a fair skin, blue eyes, chestnut or auburn hair, and are quite good-looking. They claim to be full-blooded Zuñians, and have no traditions of intermarriages with any foreign race. The circumstance creates no surprise among this people; for from time immemorial a similar class of persons has existed in the tribe."—*Whipple*.

† I believe this to have been in the upper valley of the Rio Gila, where so many ruins still remain.

‡ Totontec is doubtless the country lying upon the waters of the Rio Verde and Pueblo Creek. Civilization and the arts must have made considerable progress there; but the valleys are now quite deserted.

§ The position of the kingdom of Acus is not mentioned. It may have been upon the Colorado Chiquito, or in the Cañon de Chaco; at both places there are ancient ruins, already described.

with one horn. The colour of the skin was like that of a goat, and the hair was a finger thick.

The inhabitants requested him to stay here three or four days, because from this place they were "four days' journey into the desert, and from the first entrance into the same desert unto the city of Cevola are fifteen great days' journey more." Accompanied by thirty of the principal Indians, with others to carry their provisions, he entered this second desert on the 9th of May. He travelled the first day by a very broad and beaten way, and came to dinner unto a water, and at night unto another water, where the Indians provided him with a cottage and victuals. In this manner he travelled twelve days' journey. At that point he met one of Stephen's Indians, who, "in great fright and covered with sweat," informed him that the people of Cevola had at first imprisoned, and afterwards killed the negro.

Father Marco himself then became fearful of trusting his life in the hands of that people. But he told his companions that he "purposed to see the city of Cevola, whatever came of it." So he ascended a mountain and viewed the city. He describes it as "situated upon the plain at the foot of a round hill*, and maketh show to be a fair city, and is better seated" than any that he has seen in these parts. The houses "were builded in order" according as the Indians had told him, "all made of stone, with divers stories and flat roofs. The people† are somewhat white; they wear apparel, and lie on beds; their weapons are bows; they have emeralds and other jewels, although they esteem none so much as turquoises, wherewith they adorn the walls of the porches of their houses, and their apparel and vessels; and they use them instead of money through all the country. Their apparel is of cotton and of ox-hides, and this is their most commendable and honourable apparel." They use vessels of gold and silver, for these metals are found in greater abundance here than in Peru. They buy the same for turquoises in the province of Pintados‡, where there are said to be mines of great abundance. Of other kingdoms he says he could not obtain such particular information. When he told the Indian chiefs that were with him what a goodly city Cevola seemed, they answered him that it was the least of the seven cities, and that Totontecac was the greatest and best of them all, because it had so many

* This description answers quite well to Zuñi at the present day. See engraving, *l. c.* page 164.

† "The following he would not have seen, but probably states on the authority of his informers."—*Whipple*.

‡ In the mountains around Tucson many gold- and silver-mines have been discovered, proving that there must have been some foundation for this statement.

houses and people that there was no end to them. Having set up a cross and made a heap of stones, he named that country El Nuevo Regno de San Francisco. Then, "with more fear than victuals," he returned. In two days he overtook the people he had left behind, crossed the desert, hurried from the valley, and passed the second desert. Having arrived at the valley of the Gila, he determined to visit the great plain he had been informed of towards the east; but, for fear of the Indians, did not go into it. At its entrance he saw "but seven towns" of a reasonable size, which were afar off, in a low valley*, being very green, and having a most fruitful soil, out of which ran many rivers.

Fired by the high-coloured reports brought back by Father Marco, Francisco Vasquez de Coronado, already famed as a great soldier and explorer, determined himself to start for Cevola. His expedition was composed of the flower of the Spanish chivalry, and as he marched northward through Sonora by land, Fernando Alarçon, with two ships, was sent up the coast to render assistance should occasion require. It was not known at that time (1540) that Lower California was united to the mainland, so that Alarçon soon found his progress stopped at the head of the Gulf of California. He ascended the Rio Colorado for eighty-five leagues, and, not encountering Coronado, returned by water to New Mexico.

Soon after Coronado had started, one Melchior Diaz set out after him, with twenty-five men. He, however, by directing his course to the westward, also discovered the Colorado, and returned to Mexico by sea, bringing back the first announcement that Lower California was not an island. He described the Indians along the Rio Colorado as being a very tall race, almost naked—the men carrying banners, and bows and arrows, the women wearing feathers and an apron of deerskin; their noses were pierced; ornaments hung from their ears; and the warriors smeared themselves with bright-coloured paint.

Nearly at the same time Coronado, having penetrated with his party to Zuñi, despatched one of his officers, Garci Lopez de Cardenas, with a detachment of men to the Moqui villages; and this party made a third discovery of the Rio Colorado, many hundred miles above its mouth. After travelling for twenty days through a broken volcanic country, where they experienced great scarcity of water, they suddenly came upon a deep cleft in the earth's surface which barred all further progress. Lopez describes it as being deeper than the side of the highest mountain,

* These pueblos have already been referred to; he probably passed the Pina-leño Cordilleras to the eastward, and looked down upon a part of the upper valley of the Gila.

while the surging torrent below seemed not more than a fathom wide. Two men tried to descend; but after with difficulty climbing down a third of the way, they were stopped by a rock, which, although from above it did not appear larger than a man, was, in reality, higher than the tower of the cathedral at Seville. "In no other part of the continent had they seen so deep a gulf hollowed out by a river for its course." Thus the discovery of the Great Cañon of the Colorado dates back to the year 1540.

Coronado's trip to Cevola does not seem to have been quite as prosperous at first as that of Father Marco. He met with great hardships, and lost many of his horses and men before reaching the Rio Gila, and, after resting there two days, seems to have had great difficulty in making his way through the Mogollon Mountains. "But," he continues, "after we had passed thirty leagues of the most wicked way, we found fresh rivers and grass, like that of Castile, and many nut-trees (Pinon pines), whose leaf differs from those of Spain; and there was flax, but chiefly near the banks of a certain river, which therefore we called El Rio del Lino" (Colorado Chiquito)*. Here he was met by some people of Cevola, who first appeared friendly, but afterwards attacked his army very valiantly. At last he arrived at the walls of Zuñi, and sent messengers thither; but they were ill-treated and fired at, upon which, after an attack and skirmish without the walls, he boldly assaulted the city, and, after considerable resistance, took it by storm. The Indians fought with bows and arrows, and threw stones upon them from the walls; Coronado himself was twice unhorsed, but his Spanish armour saved him. Plenty of corn was found in the town, of which they were greatly in need, several persons having starved on the way. "It remaineth now to testify," writes Coronado, "of the seven cities, and of the kingdoms and provinces whereof the Father provincial (Father Marco) made report to your lordship; and, to be brief, I can assure your honour he said the truth in nothing that he reported, but all was quite contrary, saving only the names of the cities and the *great houses of stone, whereof there are about two hundred encompassed with walls; and I think that, with the rest of the houses which are not so walled, there may be together five hundred.*" In other words the conqueror found neither silver, gold, nor precious stones; but he gives a very accurate description of the appearance, dress, and mode of living of the people, which does not differ in any particular from that of the present day. "The seven cities are seven small towns, all made with this kind of [many-storied] houses that I speak of; they stand all within four leagues together, and are called

* Still called Flax River.

collectively the kingdom of Cevola." . . . "They eat the best cakes I ever saw; and they have the finest order and way of grinding, so that one Indian woman of this country will grind as much as four women of Mexico." . . . "That which these Indians worship, as far as we hitherto can learn, is the water; for they say it causeth their corn to grow and maintaineth their life." As regards the answers they gave him about other cities, Coronado says that he thinks they do not tell him the truth. They said that they killed the negro Stephen because "he touched their women."

After leaving Zuñi, Vasquez de Coronado travelled eastward into the Rio Grande valley and discovered, or rather re-discovered, the pueblos built upon that stream. Amongst these were Acuco (Acoma), "a town upon an exceeding strong hill," Tiguex (Pecos), Quivera, Axa, and Cicuyé, four leagues from which they met with a new kind of oxen (buffalo), wild and fierce, whereof the first day they killed fourscore, which sufficed the army for flesh. "All the way was as full of crooked-backed oxen as the mountain sierras in Spain are of sheep." Nowhere did they find gold, silver, or precious gems; and in the end of March 1542, Vasquez Coronado, after receiving a severe fall from his horse while tilting at Tiguex, returned in disgust with his army to Mexico. "It grieved Don Antonio de Mendoza very much that the army returned home; for he had spent about threescore thousand pesos of gold, and owed a great part thereof still."

The Abbé Domenec states that as early as the year 1542 the Spaniards had gained possession of no less than seventy-four towns, distributed amongst fourteen provinces*, of which Tiguex formed the centre and Cevola probably the furthest westward. These provinces, therefore, do not include any of the communities celebrated in those days, such as Totonteac, Moqui, Acus, Marata, &c., which occupied regions far removed from the Rio Grande.

On the 10th of November 1582, another expedition, headed by a citizen of Mexico, called Antonio de Espejo, left the valley of San Bartolo (160 leagues from the city of Mexico) to explore the Rio del Norte and to discover the fate of two friars, Lopez and Ruyz, who were reported to have been murdered there.

Directing his course northward, he met with great numbers of Conchos (Papagos) who dwelt in villages or hamlets covered

* The provinces were:—Cevola, containing 7 towns; Tucayan, 7; Acuco, 7; Tiguex, 12; Cutahaco, 8; Quivera, 7; Sierra Blanca, 7; Ximena, 3; Cicuyé, 1; Hemes, 7; Oji Caliente, 3; Yuque-Yunque, 3; Braba, 1; Chia, 1: in all 74.

with straw. These Indians went nearly naked, cultivated maize, pumpkins, and melons, and were armed with bows and arrows. They worshipped neither idols nor aught else. The caciques sent information of the expedition from one town to another, and the party was well treated. They passed through the Pasaguates, the Zoboses, and the Jumanes, who were called by the Spaniards Patarabueges. "Their villages are upon the Rio del Norte; their houses are flat-roofed, and built of mortar and stone." These people were well clothed, and seemed to have some knowledge of the Catholic faith. Ascending the great river, they discovered another province of Indians, who showed them many curious things made of feathers, with divers colours, and many cotton mantles striped blue and white, like those brought from China. These people showed by signs that five days' journey westward there were precious metals.

Journeying thence northward along the Rio del Norte they were well received amongst a numerous population. Here they were told, by a Concho Indian who accompanied them, that fifteen days' journey towards the west could be found a broad lake, and great towns with houses three and four stories high*. They noted especially the excellent temperature of the climate, good soil, and abundance of precious metals.

From this province they travelled fifteen days without meeting any one, passing through woods of pine trees bearing fruit like those of Castile.

Having thus travelled eighty leagues, they arrived at villages where there was much excellent white salt. Ascending the valley of the aforesaid great river twelve leagues further, they arrived at the country which they called New Mexico. Here, all along the shore of the river, grew mighty woods of poplar (cotton-wood), in some places four leagues broad, and great store of walnut-trees and vines, like those of Castile. Having travelled two days through these woods, they arrived at ten towns situated upon both sides of the river, where were about ten thousand persons. Here were houses four stories in height with "stoves for the winter season." They had "plenty of victuals and hens of the country." "Their garments were of cotton and deer-skins; and the attire, both of men and women, was after the manner of the Indians of Mexico." "Both men and women wore shoes and boots, with good soles of leather—a thing never seen in any other part of the Indies." "There are caciques who govern the people, like the caciques of Mexico, with sergeants to execute their commands. In all their arable

* Probably the Laguna de Guzman and the pueblos on the river which feeds it.

grounds, whereof they have great plenty, they erect on the one side a little cottage, or shed, standing upon four poles, under which the labourers eat and pass away the heat of the day; for they are a people much given to labour." "This country is full of mountains and forests of pine trees." "Their weapons are strong bows, and arrows pointed with flints." "They use also targets or shields made of raw hides."

After remaining four days in this province, not far off they came to another called the province of Tiguas (Tiguex), containing sixteen towns, in one of which the two friars, Lopez and Ruyz, had been slain. Hence the inhabitants fled. The Spaniards, entering the town, found plenty of food, hens, and rich metals. Here they heard of many rich towns far towards the east. Two days' journey from the province of Tiguas they found another province containing eleven towns and about forty thousand persons. The country was fertile, and bordered on Cevola, where was abundance of kine. Here were signs of "very rich mines." Having returned to Tiguex, they ascended the Río del Norte six leagues to another province called Los Quires. Here they found five towns, and fourteen thousand persons who worshipped idols. Among the curious things seen at this place were a pig in a cage, and "canopies like those brought from China," upon which were painted the sun, moon, and stars. The height of the pole-star led them to believe themselves in north latitude $37\frac{1}{2}^{\circ}$.

Pursuing the same northerly course, fourteen leagues thence they found another province, called the Cumanes (or Punames), with five towns, of which Cia (Zia) was greatest, having twenty thousand persons, eight market-places, and houses plastered and painted in divers colours. The inhabitants presented them with mantles curiously wrought, and showed rich metals, and mountains near which were the mines. Having travelled six leagues north-west, they came to Ameies, "where are seven great towns and thirty thousand souls." One of the towns was said to be very great and fair; but as it stood behind a mountain, they feared to approach it. Fifteen leagues west they found a great town, called Acoma, containing about six thousand persons, and situated upon a high rock, which was above fifty paces high, having no entrance except by stairs hewed into the rock. The water of this town was kept in cisterns. Their corn-fields, two leagues distant, were watered from a small river, upon the banks of which were roses. Many mountains in this vicinity showed signs of metals; but they went not to see them.

Twenty-four leagues westward from Acoma they arrived at Zuñi, by the Spaniards called Cibola, containing great numbers of Indians. Here were three Christian Indians, left by Coro-

nado in 1540. They informed Espejo that "threescore days' journey from this place there was a mighty lake, upon the banks whereof stood many great and good towns, and that the inhabitants of the same had plenty of gold, as shown by their wearing golden bracelets and ear-rings." They said that Coronado had intended to go there, but having travelled twelve days' journey he began to want water, and returned. Espejo, desirous of seeing this rich country, departed from Cibola, and having travelled twenty-eight leagues west, found another great province *, of about fifty thousand souls. As they approached a town called Zaguato, the multitude, with their caciques, met them with great joy, and poured maize upon the ground for the horses to walk upon, and they presented the captain with forty thousand mantles of cotton, white and coloured, and many hard towels with tassels at the four corners, and rich metals which seemed to contain much silver. Thence travelling due west forty-five leagues, they found mines, of which they had been informed, and took out with their own hands rich metals containing silver. The mines, which were on a broad vein, were in a mountain † easily ascended by an open way to the same. In the vicinity of the mines there were numerous Indian pueblos. "Hereabout they found two rivers ‡ of a reasonable bigness, upon the banks whereof grew many vines bearing excellent grapes, and great groves of walnut-trees, and much flax like that of Castile."

Captain Espejo then returned to Zuñi. Thence he determined to ascend still higher up Rio del Norte. Having travelled sixty leagues towards the province of Quires, twelve leagues further east they found a province of Indians called Hubates, containing twenty-five thousand people well dressed in coloured mantles of cotton and hides. They had many mountains full of pines and cedars; and the houses of their towns were four or five stories high. Here they had notice of another province, distant one day's journey thence, inhabited by Indians called Tamos (Toas), and containing forty thousand souls. But this people having refused admittance to their towns, the Spaniards returned, and, following 120 leagues down a river called Rio de las Vacas (Rio Pecos), united again with the Rio del Norte, and went homeward in July 1583. In conclusion, the author adds:—"Almighty God vouchsafe His assistance in this business, that such numbers of souls redeemed by His blood may not utterly

* Mohotze (Moqui?).

† Probably San Francisco Mountain, near which are large ruins described by Captain Sitgreaves.

‡ Probably the Colorado Chiquito (Rio del Lino) and Rio Verde.

perish; of whose good capacity, wherein they exceed those of Mexico and Peru, we may boldly assert that they will embrace the Gospel and abandon such idolatry as now the most of them do live in."

If this account of Antonio de Espejo be a tolerably accurate chronicle of facts, the Rio Grande valley must have been very well peopled. He describes no less than sixteen provinces or kingdoms, and mentions others from hearsay; and if his estimates of population at all approach the truth, there were far more people in that one valley in the sixteenth century than there are now in the whole of New Mexico and Arizona united, including both Mexicans and Americans.

Although the Pueblo Indians seem to have been unacquainted with the working of metals, yet we hear reports of gold and silver being discovered after this time (1582) in many parts of the very country which was reported by its discoverers to be utterly unworthy of colonization. It would, however, be giving the subject more attention than is here desirable were I to quote further from Spanish sources, especially as I think the chief object has been already gained, namely, of proving that the towns now in ruins were thickly inhabited when the first Europeans entered the country.

Looking at the question of the rise and fall of Pueblo Indian power in New Mexico and Arizona from a geographical as well as an historical point of view, I have come to the following conclusions respecting it; but in expressing these views I do not bind myself very closely to them; for I think it quite probable that far more light may some day be thrown upon this interesting subject by others, who will be able to bridge over many gaps in the evidence which now form almost impassable barriers to a complete line of argument.

These town-building Indians, I consider, were the skirmish-line of the Aztec race when that race was united and in the plenitude of its power. They came originally from the southern provinces of Mexico, probably in separate detachments—the restless spirits of semicivilized tribes, speaking distinct dialects, although more or less united under one central government; and they tried, with all the skill brought from Anahuac and the southern provinces of Mexico, to colonize the outlying countries to the northward. The route taken by these Aztec pioneers was probably that which the physical geography of the country naturally suggests, viz. through the provinces now called Sinaloa and Sonora, west, of course, of the main Cordilleras, to the Gila valley, and thence northward, along the tributary streams of that river towards the Great Cañon of the Colorado. Some

followed the Gila, across the Gila desert, to its mouth, and thence up the Colorado, until, attracted by the fertility of some of its valleys, they planted a colony on its banks, and appear to have fraternized to a great extent with the native tribes of that district. And thus it was that Captain Fernando Alarçon, who, in 1540, discovered the Rio Colorado, "having passed various tribes," as he ascended the stream, "without being able to communicate except by signs, at length reached a people who understood the language of an Indian he had brought with him from Mexico, and told him of a similar people who dwelt far to the eastward in great houses built of stone, wore long white robes, and came yearly to the river to buy maize; for their fields were small, whereas the lands along the Colorado, being subject to an annual overflow, produced food in abundance" *.

The main stream of emigration evidently flowed northward; the rich bottom-lands along the Gila were occupied and placed under irrigation, the valleys of the Rio Verde, Salinas, and other streams were taken possession of, and the Apaches (who probably carried on agriculture to some extent along their banks) were driven into the mountains. These savages were probably treated by the Aztecs as barbarian hordes, whom they found it impossible thoroughly to subdue, but who harassed them perpetually, and obliged them to devise means of protecting their settlements against surprise, and their rich corn-fields from pillage. Thus they introduced the art of building houses of stone and adobe from Mexico into their newly acquired territory, and adopted that system of communism in their fortified towns which best suited their purpose. They chose commanding positions upon the summits of the mesas, overlooking large tracts of fertile bottom-land, and added story to story in such a manner that a few resolute defenders could keep almost any number of assailants, similarly armed, at bay. The Apaches seem to have been at last so successfully kept under, that Father Marco and Vasquez de Coronado were conducted by the Aztecs through the very centre of a country which is now entirely given over to the savages, and across which no one at the present time would dream of passing. Nor do we hear much about these sons of plunder until nearly the middle of the 18th century.

The town-builders gradually pushed their way northward to Pueblo Creek, the Aztec Mountains, and the San Francisco Peaks; but on trying to penetrate further their progress was

* The tribe here spoken of may be the Mojaves. If so, contact with the neighbouring tribes must have caused them sadly to degenerate; for at present they are polygamists, like the other Colorado tribes, and do not seem superior to them in intellect or manner of living.

suddenly arrested by an impassable barrier—the cañons of the Colorado and Flax (Chiquito) rivers, which, united, form a gulf 300 miles at least in length, directly across their course.

Stopped more effectually by nature than by any barrier man could devise, they naturally rejected the worthless regions lying to the westward, and turned their course towards the east, occupying the fine valleys of the Colorado Chiquito above its cañon, and following its branches to their source. Having established the kingdom of Cevola, of which Zuñi was the capital, and several other clusters of towns on the neighbouring streams, they commenced to push still further up into the Navajo country, and tried to protect themselves wherever they went against that tribe by building fortified towns. Thus the seven Moqui villages were built; and still further to the north another cluster of ruins bear record of yet another colony. To the north-eastward they passed from the heads of the Flax River to the southern branches of the San Juan, where they built many populous towns, as the ruins in the Cañon de Chaco and the Valle de Chelly bear witness, until at last, by following up the headwaters of the Rio de San Juan into the mountains of Colorado, they entered the commencement of the Rio Grande valley, and thus discovered a new and still finer region to colonize and to subdue.

Gradually they worked down the valley from the *north, as their traditions assert*, and very naturally built a large stronghold at Toas, to protect that magnificent valley against the attacks of Utes from the mountains, to which it was exposed. In time the entire valley was peopled and studded with groups of towns from latitude 37° to 32° , a distance of over 400 miles. So numerous did the Pueblo Indians become in the main valley that they found it unnecessary to live in fortified towns there; but the settlements on the outskirts, such as Pecos, Quarra, or Gran Quivera, where raids from the Buffalo Indians (Arapahoes and Comanches) were to be feared, or Laguna and Acoma, unpleasantly near the homes of the Navajos, were constructed on the same plan as those in the Colorado basin, and were quite as strongly fortified.

Lastly, it is so short and easy a route from the Rio Grande valley about El Paso (which district, according to early Spanish authorities, contained many towns and a great number of people) to the beautiful and fertile valley of the Rio Corralitos and its lake the Laguna de Guzman, that I feel convinced the Casas Grandes on this stream were built by a colony thence, and that the people now occupying it were quite right when they told Mr. Bartlett that the big houses were built by Montezuma's people, who came there *from the north*.

Thus it is that the town-building Indians of New Mexico, not having any record of their former emigration from Old Mexico, have introduced the worship of Montezuma and a state of civilization quite unknown in North America, and yet affirm, in many oft-repeated traditions, that they came from *the north*—the headwaters of the Rio Grande.

They are right as far as they go; but they seem to me to have misled every authority I have met with on the subject, some of whom have expended much ingenious argument in trying to prove that they came from the north-western part of the continent (perhaps originally from Kamtschatka), that they crossed a region occupying the upper basin of the Colorado, inhospitable enough to repel any colonists under the sun, and that their town-building and Montezuma-worship were of endogenous growth, founded by that great emperor himself.

This is certain, viz. that as one community claims the head of the Rio Grande as the birthplace of the great king, another some district in its own part of the country, and so on, there is no reliance whatever to be placed on any such attempts at local exaltation; but that these people are an offshoot of the race which, under the name of Aztec, overspread Mexico previously to the invasion of the Spaniards, there is, I think, very little doubt.

As late as the end of the 16th century all or nearly all the ruins scattered throughout the country, besides many lesser ones now worn away, were inhabited, and the country, according to Spanish accounts, was very fairly populated. At first the Spaniards were received with confidence and kindness; they seem to have been welcomed, by a race striving after civilization, as superior beings come to help them in their struggle against barbarism. But they soon found that conquest and conversion by force to a new creed were the ruling passions of the intruders, and that they must fight to the last to protect their homes.

From the scraps of information furnished us by Spanish missionaries and commanders we know that the stand these people made for freedom was a long and gallant one. But of course it was useless.

The Papagos, who rendered so much assistance to the earliest pioneers, made a most protracted resistance; and, after years of warfare, at last united in a body, invoked their deity (who was supposed to live on the summit of Babuquivari Peak), placed all their families, cattle, and worldly goods in a place of safety, and risked and lost their all in one final battle. Since then they have forsaken their old faith, and remained in peace with the Mexicans.

All the Pueblos were at last subdued, even to the Moquis, far

to the northward, who, by the zeal of the Franciscans, had been "wholly converted and reduced" before the middle of the 17th century.

Until 1680 the Spaniards appear to have held undisputed sway everywhere; and they adopted their usual course of enslaving the entire population. They colonized the country in considerable numbers, explored the mountains for precious metals, and did a great deal of mining in many places.

If slavery when applied to field labour is destructive to life, what must it be when directed to mining? By means of manual labour alone (that is, by carrying the ore in hand-baskets from the "labores" and the water of the deeper workings in buckets, and by grinding the quartz in the rude "arastras," to which men were yoked) large fortunes were made by the conquerors. The ruins of a large prison at the copper-mines in the Miembres Mountains, old mines discovered in greater numbers year by year, which have been carefully stopped up, as well as the traditions of the Indians, all show clearly how the Spaniards used their power.

At last the miserable Pueblos could bear their degradation no longer, and rose throughout the entire country upon their task-masters. Thoroughly detesting the Spaniards, they gave no quarter, and swept them completely from the land. The inhabitants of Santa Fé escaped with their lives down the Rio Grande and founded El Paso, which was the most northern point retained by the whites.

The people of Moqui joined with all their other neighbours in the insurrection, and renounced the Catholic faith. They were never afterwards brought under subjection, nor was the Cross again planted either there or at Zufii. As regards the other "kingdoms," they were gradually retaken, but not until seven years of hard fighting had thoroughly crushed the inhabitants. We may be tolerably certain that, after massacring their kinsfolk and renouncing Christianity, the Pueblo Indians received no mercy from the Spaniards.

When peace and Christianity were again restored, a more humane policy seems to have been inculcated from the home government and strongly demanded by the clergy on behalf of their poor brethren. As early as the year 1551 we find statutes amongst the laws of Spain laying down, "in the first place, what means are most suitable for the instruction of the Indians in the the Holy Catholic Faith, &c.," and, in the second place, providing that "the Indians should be brought to settle," and that such lands be chosen for them as are "healthy, ascertaining if there may live in them men of great age, and youths of good condition . . . whether animals and flocks are healthy and of ample

size fruits and articles of food good the land suitable for sowing" (Charles V., 21st March, 1551. Decrees dated June 26th, 1523, and Dec. 1st, 1543.) Also decrees of Philip II., 1638, are to a similar effect. But one dated Madrid, June 4th, 1687, is of especial importance; for it no longer talks of placing the Indians upon reservations; but it extends the system of giving Spanish grants to the Pueblo Indians, and it presents them with those very letters patent which they now hold, and which the United States government has promised to respect.

The following are a few abridged quotations from it :—

"Whereas, as in my Royal Council of the Indos, the Marquis Folces, Viceroy of New Spain, ordered that each Pueblo as might need land to sow, &c. . . . should be given 500 * varas, and more if necessary, and that no land should be granted to any one nearer than 1000 varas, cloth or silk measure, to the houses and lands of the Indians. . . . And whereas these Indian lands have been encroached upon by owners of estates and lands, thereby depriving the Indians of them, and seizing upon them, sometimes violently, sometimes fraudulently, for which cause the miserable Indians have lost houses and towns, which is what the Spaniards seek for and desire. . . . I have thought it wise to order and command that there be given and assigned generally to all the Indian Pueblos of New Spain for their farming lands *not only* 500 varas around the place of settlement, measured from the furthest house in the place north, south, east, and west, and not from the church (generally placed in the centre of the village), but also 1000 varas more, and shall be authorized to mark off as many more varas of land as shall appear necessary without limitation."

The size of these grants differs considerably amongst the pueblos. In eight pueblos each grant covers between 17,000 and 18,000 acres; Isleta contains 110,000 acres; Santa Domingo 74,000 acres; the smallest is 13,000 acres. Most of them date back to 1689, two years after the passing of the above Act. The date of the patent of Sandia is 1748. Thus, then, we have a distinct acknowledgment by the Spanish government of the necessity for granting special licenses to this industrious and semicivilized people.

One of the greatest evils, however, which existed under Spanish rule was the almost entire absence of responsibility in officers sent out to govern the remote provinces. However poor the masses became, the men in office must grow rich. It mattered but little how much native labour was consumed, so long

* 5000 varas=1 legua=2.636 English miles.

as the coffers of the wealthy were rapidly replenished. And thus it happened that the Pueblo Indians gradually decreased; wars and slavery did their worst, until they were unable in many places even to hold their own against the Apaches, who, quick in discovering the weakness of their neighbours, did not hesitate, we may be sure, in trying to complete their ruin.

All the pueblos situated along the Rio Verde, the Salinas, and other northern branches of the Gila, were, from their position, most exposed to attack. The dead tell no tales; but if those ruins could speak, I think they might relate dismal stories of crops yearly destroyed all around them, of cattle run off by thousands, of famished children calling for bread, and of sons and fathers left dead amongst the mountains. The pueblos on Pueblo Creek, those on the streams in the Navajo country, and others similarly situated shared the same fate; the Indians of Zuñi, the Pimas, and the Papagos were able to protect themselves. The Moquis were saved by the impregnable nature of their country; and the remnant of the kingdoms in the Rio Grande valley were, of course, protected by the Spanish population.

The time at last came when the strong military establishments, so well kept up when Spain was powerful, gradually fell to decay as troops were required to maintain the semblance of power in the southern provinces; and thus the Mexicans, as well as the Pueblos, found themselves unequal to the task of keeping the savages at bay.

No further proof is required of this statement than the following quotation from Miguel Vineta's 'History of California,' dated 1758. After accurately describing the dimensions of the Apache country, he continues:—"Within a circuit of 300 leagues the Apaches reside in their small rancheras erected in the valleys and in the breeches of the mountains. They are cruel to those who have the misfortune to fall into their hands; and amongst them are several apostates. They go entirely naked, but make their incursions on horses of great swiftness, which they have stolen from other parts. A skin serves them as a saddle. Of the same skins they make little boots or shoes of one piece (moccasins), and by these they are traced in their flight. They begin the attack with shouts at a great distance, to strike the enemy with terror. They have not naturally any great share of courage; but the little they can boast of is extravagantly increased on any good success. In war, they rather depend upon artifice than valour; and on any defeat submit to the most ignominious terms, but keep their treaties no longer than suits their convenience. His Majesty has ordered that if any require peace, it should be granted, and even offered to them

before they are attacked. But this generosity they construe to proceed from fear. Their arms are the common bows and arrows of the country. The intention of their incursions is plunder, especially horses, which they use both for riding and eating, the flesh of these creatures being one of their greatest dainties.

"These people, during the last eighty years past, have been the dread of Sonora, no part of which was secure from their violence. . . . Of late years the insolence of these savages has been carried to the most audacious height from the success of some of their stratagems, particularly owing to the variances and indolence of the Spaniards. . . . The Apaches penetrate into the province by different passes, and, after loading themselves with booty, will travel in one night fifteen, eighteen, or twenty leagues. To pursue them over mountains is equally dangerous and difficult; and in the levels they follow no paths. On any entrance into their country, they give notice to one another by smokes or fires; and at a signal they all hide themselves. The damages they have done in the villages, settlements, farms, roads, pastures, woods, and mines are beyond description; and many of the latter, though very rich, have been forsaken."

No better description than this could be given of the Apaches at the present time.

With respect to Casas Grandes in Chihuahua, these pueblos, when built, were evidently liable to the incursions of the Apaches; otherwise they would not have been constructed as fortified towns. But rich mines were early discovered in the mountains hard by, and extensively worked by the Spaniards; so that it is impossible to say whether slavery or the Apaches, or both, caused the destruction of the entire population.

It only remains, in concluding this account of the Pueblo Indians and their history, to say a few words on a subject usually brought forward as chief amongst the causes which have led to the extinction of that race.

I have heard it affirmed on all sides that the country has become depopulated because it is no longer capable of sustaining its former inhabitants, and that as the face of nature changed, so did those dependent upon nature diminish. The country *has* changed for the worse. A few centuries ago the rainfall was greater, forests were more abundant, spots were productive which now are barren, and springs gushed from the ground which now are dry. But at this period, also, a much larger area of land was probably under cultivation (both with and without irrigation) than to-day; and I think it far more likely that the decrease in the amount of land cultivated tended to produce aridity than that the change of climate made the country uninhabitable. The Spaniards probably did great mischief by strip-

ping the hills of timber for mining-purposes, and thus drying up springs, the waters of which were so needed in the valleys. The greater part of the Rio Grande was swept of its timber, and is very different now from what it was when Antonio de Espejo visited it in 1582*. The Apaches also have a very destructive habit, amongst their long catalogue of vices, of firing the forests of their enemies. Although these facts may account for the gradual drying up of the country, they will not explain how it happens that the fertile bottom-lands along the Rio Verde (a country, according to Lereux, "well timbered, and containing many lagoons") are now uninhabited, while the people of Moqui, who live almost in a desert, have managed to fight out the battle of existence down to the present day.

Colonel Greenwood, who had charge of one of our engineering parties, discovered two very remarkable objects near the San Francisco Mountains. One was a broken jar, into the hollow of which lava had flowed; the other was the skeleton of a man, encased in the same material. If the colonel was not deceived, it is certain that some of the lava which now covers large tracts of country in many parts of New Mexico, and especially Arizona, and still looks bright and fresh, was poured over the surface within the present epoch; but it cannot prove that either the convulsions of the earth or climatic changes produced by them so altered the condition of the land that it starved out its inhabitants. The natural workings of cause and effect are, I think, sufficient to account for the present desolation of these regions, without calling to our aid either meteorology or geology.

XX.—On the Arapahoes, Kiowas, and Comanches.
By MORTON C. FISHER, Esq.

THERE are few people, among the various branches of the human family scattered over the surface of the earth, who excite the interest and sympathy of the civilized nations of the world, to a greater degree than the Indians of North America, more especially those Indians who formerly occupied that portion of the American continent now inhabited by the people of the United States.

Our knowledge of them commences with the discovery and early settlement of the Western Hemisphere; and the early

* The engraving of the Rio Grande, in the next chapter (*op. cit.*), represents it as well timbered; this view, however, was taken in a district quite uninhabited, and one, moreover, which has remained so for a very long period.